

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT



KOSOVO AGRIBUSINESS SECTOR ASSESSMENT

Final Report

USAID SEGIR IV GBTI
Contract No. PCE-I-00-98-00013-00
Task Order No. PCE-I-02-98-00013-00
November 1999



Booz·Allen & Hamilton Inc.
Cargill Technical Services Inc.

Kosovo Agriculture and Agribusiness Sector Assessment and Development Program Recommendations

Final Report

Task Information:

Task Name: Kosovo Agribusiness Sector Assessment

Period of Performance: September 9, 1999 - November 11, 1999

Task Number: PCE-I-02-98-00013-00

Contract Number: PCE-I-00-98-00013-00

Contractor Name: Booz-Allen & Hamilton Inc.

USAID CTO: John Wiles

Date of Document: November 17, 1999

Document Title: Kosovo Agribusiness Sector Assessment - Final Report

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I. Executive Summary

The objective of this project was to “quickly assess the current state of the agribusiness sector in Kosovo and to identify how USAID should provide assistance for improving the sector’s performance in the immediate, near and longer term. Given the unique situation in Kosovo – politically, economically and socially – the consultants should be innovative as well as practical.” The assessment methodology involved a review of others work in agriculture and agribusiness in Kosovo and more than 60 key informant interviews in Kosovo conducted in late September and early October 1999.

The population of Kosovo is around 1.8 million, 70% of which are under the age of 30, 80 – 85% are ethnic Albanian and 70% live in rural areas. Sixty to seventy percent of the pre-war population was engaged in agriculture or agribusiness that accounted for 35 – 40% of Gross Domestic Product (GDP). Both agriculture’s contribution to GDP and per capita income of only \$340 declined in the ‘90s.

Ethnic tension between Serbs and ethnic Albanians has been intense for the last 10 years and resulted in severe police action in early ‘89 and war in ‘99. Ethnic Albanians were expelled from all public sector positions, including those in agriculture and agribusiness, in ‘91. Technically Kosovo is a province of Yugoslavia, but it is currently administered and policed by the UN (UNMIK) and protected by NATO (KFOR). There is currently no official local government and the most active political party, associated with the Kosovo Liberation Army (KLA), would apparently not win an election. The Deutschemark (DM) is the official currency.

The 864,000 acres of tillable land in Kosovo is shared by around 1.8 million people resulting in a comparatively small amount of cultivatable land per person (.5 acres). The 120,000 producers average farm size is only 8 acres split up into 4 – 6 different plots with less than 4 acres tillable. Yield/acre and feed conversion ratios are well below international standards and declining, recently due to producers’ inability to afford commercial inputs. Since the average family is nearly 10 persons, the small average size farm makes it difficult to feed the family, much less produce enough for sale. Therefore, less than 50% of producers sell a significant portion of their production and sales rarely exceed 30% of production. In ‘99 farm sources accounted for less than 11% of total farm family income with aid (40%), off farm income (20%) and remittances (30%) accounting for the remainder. It is questionable if the current structure of agriculture can support more than a return to a higher level of subsistence production.

Wheat for flour and corn for animal feed are the leading crops and utilize around 240,000 acres each. Fodder crops such as alfalfa (84,000 acres), vegetables (62,000 acres) and vineyards (22,000 acres) are other important crops. Pre war livestock accounted for around 50% of average farm food production. Twenty six percent of land (184,000 acres) is irrigated and 90% of cultivatable land is privately controlled. Socially “owned” kombinats (agricultural collectives) and cooperatives control around 10% of the land, but have some of the best land for integrated, commercial production. Kosovo has a long-term deficit in food production, as high as \$250 million/year, but was a past exporter of wine, apples, chestnuts, potatoes and food beans.

The large, often integrated, socially “owned” kombinats control most of commercial scale agribusiness assets. However, these assets have been poorly maintained over the past 10 years, and some were recently looted. Pre ’91 employees of the kombinats have returned to the facilities and are now operating them, but there are substantial ownership questions. Cooperatives held some assets but mostly acted as intermediaries between large kombinat input suppliers and output buyers and producers, and performed extension type services. Private sector agribusinesses tend to be small, localized and not operating due to extensive war damage, looting and lack of working capital. The most numerous private sector agribusinesses are flourmills and bakeries. Many private sector food and beverage trading companies sprung up almost immediately after the war demonstrating the sectors entrepreneurial capabilities.

The impact of the police action and war in ’98 and ’99 was devastating to agriculture and agribusiness. Producer losses to housing (44% destroyed, 27% damaged), farm buildings (39% destroyed, 8% damaged), farm machinery (74% dysfunctional) and livestock (55 – 85% losses depending on species) were substantial. Seventy percent of the land was fallow in ’99 and 50% in ’98. In ’99 the wheat harvest was around 78,000 MT versus a demand for 420,000, and maize harvest 51,000 MT versus a normal demand for 218,000. Most carry over stocks were looted or destroyed. Therefore, donors are currently supplying most (70%) food needs or imports purchased using remittances from relatives living abroad.

Some of the most important challenges that must be considered when developing an agribusiness strategy for Kosovo, in addition to those mentioned above are: most participants have few assets or cash flow to replace or upgrade their facilities or purchase inputs; since there are no banks, there are very few sources of debt, especially beyond the micro level, and those that do exist are either very expensive (24%+/year) or from questionable sources; there are very few sources of quality inputs for agriculture or agribusiness; the base of breeding stock and seed varieties is badly deteriorated; and social enterprise managers and employees have no recent experience, and prior experience was in a semi-commercial/semi-socialist environment.

Important opportunities that should be taken into consideration when developing a program include: the wine industry can be rebuilt at a modest cost versus its potential; vegetable processing can quickly return to operation at a modest cost versus potential benefits; the private sector is very interested in quickly getting back into the dairy products, layer and flour milling businesses and only lacks capital; there are significant opportunities to improve yields, output and feed conversion ratios; repairing the irrigation systems will not be highly expensive (+/- \$25 million) versus their value to agriculture; there is an approach to quickly utilizing kombinat assets if UNMIK is willing to take the initiative; and many private sector entrepreneurs have experience operating in difficult environments, as is expected for the next two years or so, and have the drive, managerial skills and desire to succeed.

Other donors and the 240+ NGOs tend to be focusing on humanitarian aid and immediate rebuilding efforts. Other USAID programs such as DART and OTI are supporting these efforts and USAID is likely to contribute to World Bank and possibly FAO “immediate needs” and “most disadvantaged” programs. FAO is coordinating NGO and donor’s emergency efforts, but the EU is responsible for economic reconstruction. The authors were not able to identify any programs aimed at helping to reestablish commercial, sustainable agricultural input supply or

output marketing entities that will support producers, generate employment, improve the food import/export balance and help improve economic growth and per capita income.

The subsectors that appear to have the best potential are: production of eggs from layers; production and processing of dairy products; grape production and wine making; vegetable production and processing; meat production and processing; flour milling and baking; corn production and the milling of quality animal feed; and fruit production and the processing of fruit products.

The primary target clients are dominantly private sector firms wanting to rebuild their facilities, then ex-kombinats with good potential to become sustainable commercial entities, then private sector firms wanting to start new businesses, especially in target subsectors.

The goal of the recommended USAID agribusiness program is to significantly increase per capita income by stimulating the rapid development of a competitive, dynamic and substantial agriculture and agribusiness sector. The specific objectives of the program are:

- a) improved total output and productivity through the more effective utilization of appropriate, current technology and know-how;
- b) increased employment in agribusiness;
- c) reduced food imports and increased exports of agriculture related products;
- d) an increased number of producers marketing a significant portion of their production;
- e) utilizing socially owned assets to quickly contribute to sustainable sector growth;
- f) increased domestic and eventually international investment in agribusiness; and
- g) an improved agricultural and agribusiness enabling environment.

The focus of the recommended program will be on enabling large numbers of rural families to move from subsistence producers to the middle class, and sustainable agriculture and agribusiness related private sector institutional development.

The recommended program has seven linked components. These are:

- 1) Design and implement a one-stop-shop Agribusiness Development Center (ADC) which would offer technical, managerial and financial assistance to target clients. Debt would be offered only until a local bank interested in agribusiness finance is available, and possibly equity via an equity Enterprise Fund. The ADC would have a domestic network of entrepreneurs to provide advice regarding operations and clients, and an international network to supply advise regarding sources of appropriate technology, know-how and other assistance. International professionals would provide integrated business services to clients while training local counterparts,. Institutional development services would be provided to private sector agribusiness associations and possibly cooperatives. Subsector specific study tours as well as operations management and technical training would be offered. A communications center would be available to clients.
- 2) Convince UNMIK to utilize viable kombinat and coop assets via a value, lease, loan and eventually auction off approach. This would allow the immediate utilization of the only commercial scale facilities in Kosovo and in several cases (wine, sun seed, seed cleaning, vegetable processing, fruit processing, etc.) the only subsector facilities available.

- 3) Evaluate the potential of an Agribusiness Re-supply Center (ARC) which would import and sell at cost high quality, appropriate inputs into production agriculture. These inputs would be available for donors and NGOs to acquire and would be used to develop local dealerships for the distribution of the inputs to producers. The ADC would help dealerships establish and sustain themselves. As domestic firms become able to import the needed inputs, or the inputs become available locally, ARC would stop carrying them.
- 4) Implement feasibility and development means assessments of the large flour milling and bakery facilities, the redevelopment of the vegetables and fruit processing facilities and the supporting irrigation system, reestablishing the sun seed and sugar beet systems and the need for and feasibility of a small rendering plant.
- 5) Provide UNMIK's Office for Rehabilitation with a commercial agribusiness development advisor to improve the economic growth orientation and sustainability of their programs.
- 6) Develop simple macro models of the agricultural and agribusiness sector as a means of illustrating the need for significant improvements and restructuring in the sector.
- 7) Assess the forestry subsector and recommend a USAID position on this important area.

Program timing is of great importance. The next season starts in April next year. Planting decisions will be made before then. Without the services offered by the above program there will be no commercial sources of quality inputs and very few buyers for output. The agribusiness sector will remain non-functional and producers will have no market for their excess production. This will result in another year of subsistence level only production, and agribusiness will not be able to make its potentially substantial contribution to Kosovo's recovery. USAID needs to have at least recommendations 2, 4 and 5 completed by January 2000, and have the ARC feasibility study and the ADC design completed by February. The ADC and the ARC need to be operational by March 2000.

The program components are interrelated in that the ARC supplies inputs to ADC clients (as well as others) and thus supports the ADC's success and stimulates the adoption of improved inputs; the feasibility studies will help the ADC develop its subsector priorities and better understand subsector opportunities, constraints and needs - the Pillar Four advisor would also find these useful; the ADC will encourage the use of ARC inputs via its technical assistance and training activities and thus improve sector productivity; the kombinat utilization recommendation will provide both ARC and the ADC with important clients, and enable the much more rapid and less costly development of output buyers from small holders, and processors of food products for the urban and export markets; support for Pillar Four will help create a "policy" environment in which ARC, the ADC and the kombinat lessees can flourish and the ADC's institutional support component will support the development and sustenance of market-led, private sector associations and support institutions, and providing market oriented, economic growth focused advice to the current administration in the short term, and to the new government in the longer term; and development of the sector macro models would provide conceptual guidance to the ADC and the Pillar Four advisor and thus help move toward a more sustainable sector and one that makes a significant contribution to economic growth and increased per capita incomes.

II. Introduction

The following section is designed to provide the reader with the background need to effectively and efficiently assimilate the remainder of the report.

A) Project Background and Objectives

The objective of this project, as described in the Scope of Work, is “To quickly assess the current state of the agribusiness sector in Kosovo and to identify how USAID should provide assistance for improving the sector's’ performance in the immediate, near and longer term. Given the unique situation in Kosovo – politically, economically and socially – the consultants should be innovative as well as practical.” Deliverables needed to accomplish the objective include an assessment of the sector, utilizing relevant work completed by others, and the provision of a set of recommendations for an optimal USAID agribusiness program in Kosovo.

During pre departure briefings in Washington we were asked to place emphasis on what other donors, NGOs and government agencies are doing for Kosovo agribusiness and how USAID can most effectively compliment their efforts. USAID/Pristina management asked for a focus on the best means to increase agribusiness employment and therefore incomes, and reverse the rural to urban migration. The Mission also requested that special attention be given to how to increase sector productivity, achieve a reasonably quick positive impact, identify products where Kosovo agricultural could have a competitive advantage both in domestic and export markets, and how Kosovo’s substantial food trade imbalance can be reduced. Six questions were asked about the potential role of specific intervention options. Mission management expressed a willingness to be innovative and take prudent risks to expediently achieve a significant positive impact. All USAID management requested that any interventions be market-led and private sector driven.

B) Methodology

This report was prepared using both secondary and primary sources of information. Many relevant documents were collected and where possible their authors were interviewed. More than 60 people were interviewed in Pristina, Kosovo Polje, Lipjan, Urosevac, Djakovica, Pec, Klina, Prizren and Suva Reka. These interviewees represent a broad cross-section of donor, NGO, local government, social sector and private sector key informants. See Attachment F for a detailed listing of interviewees. Data collection, interviews and analysis for this report took place in late September and early October 1999.

The resulting information was analyzed using the authors’ more than 60 years of cumulative experience in agriculture and agribusiness development, and in consideration of USAID’s objectives in Kosovo. This report attempts to present the results of that analysis, and the resulting program recommendations in a highly prescriptive manner. Less emphasis is placed on descriptions and “what’s so” than on prescriptions and “so what.” Highly scientific analysis and reporting was minimized to achieve expedient and pragmatic findings and sustainable economic growth focused results within the available time frame and budget.

C) Issues, Constraints and Opportunities External, but Relevant to Agriculture

There is no ongoing government in place, therefore Kosovo is being governed by United Nations representatives (UNMIK), defended by NATO (KFOR) and policed by a UN force. There is considerable confusion about who owns many assets in Kosovo, including significant agribusiness processing and storage facilities as well as a considerable amount of social sector land. Land title may also be a common problem due to the absence of records, and property ownership disputes.

Kosovo's future status is uncertain since officially it is a province of Yugoslavia, but ethnic Albanian Kosovars, who represent the large majority, would not agree to that, and some foreign governments support their position. The extent to which UNMIK is willing and able to act as an interim government, and resolve some key development related issues, is uncertain. At least until the fall/winter of 2000 Kosovars will not be able to come close to providing themselves adequate food and shelter so will be dependant on support from donors, NGOs and foreign governments.

D) Agribusiness Environment and Projections

Kosovo is a very unique situation! It is just emerging from a short but devastating war, and equally importantly from nearly ten years of severe apartheid. This combination has resulted in the nearly total economic devastation of all agribusiness physical resources except for land, and even that has a problem with unexploded ordinance, and significantly repressed technological and managerial resources.

Kosovo has a significant agricultural resource base, but high population density and an inefficient agriculture/agribusiness sector. The agricultural/agribusiness environment in Kosovo is just now being diagnosed while at the same time is rapidly changing. Ownership issues may make it difficult to reactivate some key agribusiness resources that could play a significant role in redevelopment.

The good news is that there is nowhere to go but up, and since agriculture and agribusiness must be rebuilt, it can be done on the basis of a more competitive, efficient and economic growth-supporting sector. Reinventing the past will not help Kosovars prosper in the 20th century. This report attempts to provide USAID recommendations on how it can most effectively contribute to the development of a competitive, dynamic and substantial Kosovo agribusiness sector.

E) Report Structure and Parameters

This report is organized into six sections and several Attachment. Section One is the Executive Summary, Section Two the Introduction, Section Three provides an overview of Kosovo agriculture and agribusiness and a brief review of relevant other donor and NGO programs, Section Four provides an overview assessment of the key subsectors, Section Five outlines our recommendations and Section Six responds to specific USAID intervention option questions. The Attachments contain key documents about Kosovo agriculture/agribusiness and brief

descriptions of short to intermediate term multilateral programs and the Contacts and Bibliography.

From this point forward the report will attempt to consistently use Albanian, versus the Serbo-Croatian, spelling of places and names. While this may cause some confusion for Kosovo experienced readers, it is consistent with the wishes of most Kosovars and reflects the likely future of Kosovo. See the map at the beginning of the Attachments for both Serbo-Croatian and Albanian names.

This report does not attempt to rewrite material that other professionals have already developed. Rather it references that material and summarizes those points that are relevant to our findings and recommendations. Therefore, several key recent and highly professional reports are included in the Attachments and only their most salient and relevant points included in the body of this report.

As will be noted in the following section, many other agencies, donors, the Bank and NGOs, “coordinated” by FAO, are supporting the emergency related aspects of feeding and providing shelter for economically disadvantaged Kosovars, who currently account for between 60 – 80 percent of the population. These donors and the EU are also supplying humanitarian related inputs for rebuilding the very large subsistence agriculture sector. USAID is supporting these efforts via appeals from FAO, WHO, and other UN organizations as well as the World Bank and donor’s conferences. USAID is already contributing significantly to emergency and humanitarian rebuilding via DART and OTI.

The following review of other others’ programs finds that there are few, if any, programs focused on rebuilding a market-led, private sector driven agribusiness sector with special emphasis on stimulating economic growth, versus social development. The EU/TAFKO program for a revolving rural savings and loan facility is the only possible exception. Therefore, this report does not focus on the emergency or humanitarian rebuilding aspects of Kosovo agriculture and agribusiness. Rather it emphasizes the opportunity and need for a private sector based, economic growth orientation that will help restructure Kosovo commercial agriculture and agribusiness in a competitive manner, provide significant new productive employment, improve the utilization of Kosovo’s agricultural resources, create a demand for products from small to medium scale producers and support agricultural exports to help balance cross-border trade.

This report does attempts to describe agriculture and agribusiness in different time frames. These are a) pre-1988, when Kosovo was an reasonably autonomous province of Yugoslavia, b) 1988 – 1998 when the Milosevic government pursued a colonial exploitation and dependency policy in Kosovo and expelled most ethnic Albanians from the formal sector, exploited the agribusiness sector and made Kosovo dependant on food imports from the rest of Yugoslavia, c) late ’98 and early ’99 when police action and war devastated Kosovo, d) Sept. ’99 until Fall ’00 when severe food and input shortages will exist, e) Fall ’99 until 2005 when rebuilding will take place and f) 2005 a target for significant restructuring.

The major focus of this report is on the period from spring ’00, when longer-run focused rebuilding programs will have to be operational, until 2005, the target period for a more efficient, dynamic and large agribusiness sector.

The underlying philosophy of this assessment and recommendations is that agriculture and agribusiness development in Kosovo must be broad based, sustainable and market-led, private sector driven. The focus of this work is on economic growth rather than social development. The success indicators for the program recommendations are regional and international competitiveness, employment generation, creating demand-pull on producers for higher value products, increasing Kosovo's economic self sufficiency for food and agricultural products, and raising the per capita income of participants in Kosovo agriculture and agribusiness.

III. Agriculture and Agribusiness Overview

Following is an overview of the agricultural and agribusiness sector in Kosovo. A more detailed and comprehensive assessment was planned, but the realities of collecting and analyzing information in Kosovo at the time of the fieldwork did not enable this type of assessment in the time frame and budget available to the project. This overview approach has been utilized to meet the established deadlines and be responsive to USAID's requirements. Reference is made to more detailed studies that are available on various specific topics, and these are included in the Attachments. References are also provided for relevant detailed studies that are underway and will be available soon.

It is the authors' professional opinion that this overview approach does not effect the validity of project findings, i.e., if there were time and budget to complete a detailed analysis, the recommendations would not change significantly. The authors have collected, studied and analyzed a very substantial amount of available data and information and have used that, plus their extensive professional experience, to develop the recommendations. The only missing piece is a more detailed written reporting of the data and analysis.

A) Synopsis of Kosovo Production Agriculture

About 54% of the 1.1 million ha. of land in Kosovo or 584,000 to 577,000 ha. is classified as agricultural land. Of this 185,000 ha. or (32%) are pastures and 408,000 hectares (71%) are cultivable. The climate in the eastern part has an average rainfall of 660 mm with 170 – 200 frost days. The southwest, which has a Mediterranean influence, averages 780 mm of rainfall with 196 to 225 frost-free days. Approximately 67% of the agricultural land including at least 90% of the cultivable land is privately owned. These private holding are small family farms of less than 3.2 ha each that include 1.6 ha. of arable (tillable) land. There are also 12 socially owned kombinats/agricultural cooperatives that were established through Self-management Agreements, with land varying in size from 200 to 1,400 ha. Half of these were engaged in crop production and the other half in both crop and livestock production and processing. In the past 10 years both the social farms and cooperatives have deteriorated significantly. In addition, since the mid 1980's there has developed approximately 630 medium-scale farms ("mini-farms") of around 10 ha. that are under private ownership.

Of the cultivable land about 290,000 hectares are arable or cropped land, this includes 75,000 hectares of irrigated land with the balance of 100,000 ha. classified and meadows. Field crops,

consisting mainly of wheat (120,000 to 140,000 ha.) and maize (60,000 to 70,000 ha.), are produced on approximately 185,000 to 200,000 ha. The plain of Kosovo and the Dukagjini plateau are the highest yielding areas with potential yields estimated to be between 3.2 and 3.7 tons/ha for wheat and 3.5 and 4.2 tons/ha for maize. Most production has been used for human (wheat for flour and bread) and livestock (corn as a feed ingredient) consumption in rural areas; the urban populations have been extensively dependent on external to Kosovo sources of grains.

In addition, 26,000 ha of vegetables are normally grown. The vegetables are largely supplied to the domestic market with a small portion being exported to Croatia and Slovenia. Fruit production was also significant with about 85% of the 12,000 ha planted to fruit crops in private hands and approximately 1,800 ha on state farms. These orchards have been deteriorating rapidly in the past decade due to a lack of technical services and support, as well as neglect. In the Istog, Prizren, Rahovec, Suhareka, and Gjakova areas there are 9,000 ha. of vineyards, split more or less evenly between state and cooperative farms and the private sector. As in other areas, the investment and production in social sector vineyards and wineries has markedly deteriorated in the past decade.

The livestock, dairy and poultry subsectors are also significant in Kosovo and represent 40 to 80% of rural cash income.

Production agriculture can therefore sector can be divided into 3 components:

- **Approximately 100,000 small household farms with an average of 3.1 ha. and average** livestock holdings of 1.4 cattle, 2.6 sheep and 12.7 poultry. These averages represent the cattle situation fairly accurately, as typically each rural household would have a cow for the production of milk for household consumption. Fewer households kept sheep, with typical flocks ranging from 20 to 70 head, some owners having flocks of as many as 200. The limited grazing area reflected in farm size was augmented by the grazing of roadside verges, arable stubble and corn stocks, and in the summer mountain pasture areas. Cattle are housed in the winter for approximately five months (November - end March) during which time they are fed on hay and straw, with very little supplementary (concentrate) feeding. Livestock production levels are low, and in most are cases they are tended by part-time producers whose income is supplemented by off-farm earnings.
- **Small commercial mini farms**, of which there are around 630, most of which have developed over the past twenty years and have been the object of past World Bank investment. Most are dairy and poultry farms of some 10-12 milking cows and/or units of 2,000 and more laying hens. Available statistics do not allow an estimate of the total number or proportion of livestock on these farms. Land areas seem to have been somewhat larger than those of the average private farm. Growing of alfalfa/lucern supported the greater number of cattle, and purchasing hay and concentrate rations. Poultry operations were, of course, entirely dependent on purchased feed and replacement stock supplied by the state hatchery, and more recently imported from

Hungary, Italy or Germany. Hog producers were predominately Catholic Albanian and Serb farmers.

- **Large-scale livestock production and cropping** was conducted by the kombinats (socially owned farms). While these were insignificant in terms of the numbers of ruminant livestock kept, they were the focus for improvements in cattle and sheep breeds, and important centers for milk production for the urban population. Poultry, and to a lesser extent pig production, were also important activities. Kombinats also provided a significant portion of total feed production, slaughterhouse services and milk-processing infrastructure. All kombinats suffered declines during the past decade with livestock being removed to Serbia, resulting in increased import of animal products from outside of the province. The kombinats also had large scale processing operations. Major slaughtering facilities existed at Fushe Kosove and Prizren, poultry processing at Gjilan and Gllgovc, and industrial dairy plants at Fushe-Kosove and Prizren. Feed manufacturing plants were located at Fushe Kosove and Kline. The Fushe Kosove feed mill was originally designed to service a large livestock population of over 400,000 cattle and sheep, 60,000 pigs, and 4.5 million poultry. The majority of the meat and milk processing plants are now in fair to poor condition, have quite old and outdated equipment and have difficulty getting replacement parts. Many of the social enterprises no longer exist.

B) Structure and History of Kosovo Agriculture and Agribusiness

As noted above the sector can be divided into at least six time periods. The essential elements of each are described below.

i) Pre-1988

This period can be broken down into several other subdivisions corresponding to various early attempts at the socialization of agriculture and agribusiness and major investment in the kombinats. These programs were largely unsuccessful and kombinats accumulated substantial operating losses. The 1970s and 80s, when Kosovo was an reasonably autonomous province of Yugoslavia, saw the decentralization of agriculture, the emergence of the private sector as small scale holders of land averaging less than 3 hectares, and a complex and extensive system of cooperatives. The kombinats played a lesser role in production agriculture. The early '80s saw the emergence of AgroKosovo that grouped all of the kombinats under a single entity that had its own bank, export divisions, research and development and a partnership with the University of Pristina. Most investment into agriculture and agribusiness went into AgroKosovo, while the private sector was provided little or no support.

By the late 80's most land (88% of cultivatable) was in the hands of small holders, most production (83%) was done by the private sector and nearly all (95%) of the agricultural labor force was in the private sector. However, the kombinats and AgroKosovo still controlled most post harvest facilities and the cooperatives played an important role in input supply and the provision of extension services. The government extensively controlled management of the cooperatives, and especially the kombinats, while officially they were farmer directed entities.

While agriculture received minimal financial support from any source, it was reasonably free to operate, the cooperative system was functioning and the kombinats provided a market for excess production. However, agriculture could be characterized as having low productivity and agribusiness was quite inefficient. For example wheat yields were 2.6 to 2.8 MT per hectare compared to France where yields were 8.2 MT per hectare, and dairy cow production was 10 to 12 liters per day versus 63 liters per day in the USA.

For a more detailed review of Kosovo agriculture and agribusiness prior to 1988 see Working Paper #6 of the July/August 1999 World Bank/FAO report “Kosovo: Programme for Reconstruction of Rural Economy” and “Agriculture in Kosovo: Background Note” probably from the World Bank, both of which are included in Attachment B.

ii) 1988 - 1998

During this period the Milosevic government pursued a colonial exploitation and dependency policy in Kosovo. The government apparently wanted to make Kosovo a source for raw materials for the rest of Yugoslavia, dependant on ethnic Serbian management and employees and other parts of Yugoslavia for processed and value added food and agriculture related products. This period entailed even less investment or support for production agriculture, de-emphasis of the kombinat system and the withdrawal of support for the cooperatives. Primarily in 1991, nearly all ethnic Albanians were expelled from the formal sector, including the kombinats and the cooperatives, either as managers or employees. The cooperatives largely ceased to function. Kombinat physical facilities were not maintained and most gradually stopped operating or operated at very low capacity utilization. Ownership of the kombinats was shifted from the Kosovar workers, who were in most cases ethnic Albanian, to Belgrade controlled entities and companies.

Due to the lack of employment opportunities most of the ethnic Albanian population went into subsistence agriculture or “parallel market” trading activities as their only means of support. What few agribusiness firms, nearly all small-scale, that existed did so with heavy taxation and/or extensive bribery of formal sector participants. Most of these firms were in the local inputs supply business, with very few in output marketing or processing. Producers sold most excess production directly to local or urban consumers at farmer markets. This combination resulted in a very weak and degraded agriculture and agribusiness sector, shifted control of most agribusiness assets to Belgrade and made Kosovo dependent on food imports from the rest of Yugoslavia.

Other characteristics of this period relative to production agriculture include:

- 1) Very little investment in farm machinery which led to an aging fleet and reduction in machinery numbers (from 34,948 tractors in 1989 to 31,726 much older ones in 1995);
- 2) A progressive collapse of the formal channels of input supply through the cooperative system, which had been set up in the 1980s with the support of a World Bank-financed project;
- 3) Almost no maintenance and bad management of the irrigation schemes which led to a reduction in the irrigated area from about 56,000 ha in 1990 to about 10,500 ha in 1998;
- 4) A sharp deterioration in veterinary services;
- 5) A disruption of the raw milk collection system which affected most small farmers;

- 6) A complete decline in the agricultural extension service;
- 7) The pirating of processing equipment for Serbian plants;
- 8) Restricted/selective distribution of seed, feed, fertilizers, herbicides, and insecticides; and
- 9) The International embargo on Serbia.

In 1997 only about 50% of rural family income originated from farming, with the balance being from remittances by family members working abroad, off-farm income (small businesses, kiosk etc.) and aid.

iii) Late 1998 and Early 1999

The outbreak of police action, and then war, devastated Kosovo agriculture and agribusiness. Most kombinat, cooperative and private sector agribusinesses were looted or at least partially destroyed. While many agribusiness facilities were undamaged or minimally damaged, nearly all are marginally serviceable due to long term neglect or non-use.

Producers suffered significant losses of housing (destroyed 44%, partially damaged 27%), farm buildings (39% destroyed, 8% partially damaged), farm machinery (only 26% of households report nearly all machinery is functioning), and livestock (55% - 85% losses depending on the species).

Over 70 % of the land was fallow (not tilled) for 1999; and over 50% was not tilled in 1998. The 1999 cropping season is largely lost. Depending on the source of information, only between 40% to 60% of the area usually devoted to wheat was actually sown during autumn 1998. In addition, the area planted to maize was much lower, since sowing time coincided with the beginning of intensive fighting. Furthermore, it is estimated that only about 50-60% of the wheat area and a small area of maize will be harvested in 1999. Several factors are responsible including: (1) the fear of mines, (2) the lack of maintenance and crop protection (chemical herbicides and insecticides) during the 3 months growing season will cause tremendous weed problems resulting in low yields and difficult milling, (3) some crops have been eaten by wandering animals, and (4) the lack of spare parts for combines, and in some areas a shortage of harvesting equipment. As a result, the forecast for the 1999 harvest is around 80,000 to 100,000 metric tons of wheat, compared with a harvest of 233,000 MT in 1998 and 328,000 MT in 1997, with an estimated normal consumption of about 550,000 MT per year. The harvest of maize will be very low, estimated at 40%, which will produce 15,000 to 25,000 MT. Furthermore, carry over of stocks by cereal traders and in on-farm-storage has largely been looted or destroyed.

Livestock, dairy and poultry losses have been huge with estimated cattle loss of 54%, milking cows 50%, sheep 65%, goats 75% and horses 86%. Pig losses are estimated at 19% and poultry at 85%. These losses are based on the number of animals in 1997 versus the estimated number of animals in 1999. For example in 1997 there was 3,200,000 poultry and in 1999 only 500,000 remain; for dairy cows 235,000 in 1997 and in 1999 only 119,000.

Private processing enterprises (small cereal and oilseed mills, slaughterhouses, and small dairies) were in some places specifically targeted for destruction. Some (about 30%) of the irrigation structures and pumps were vandalized, but the main infrastructure could not be damaged (dams,

main canals). Private businesses including shops and dealers of farm inputs and equipment, repair services, etc. were very often targets for destruction.

Since 1998 the situation for vineyards and fruit trees has deteriorated due to the insecurity in the countryside. Pruning of trees and vines was hardly done, and the current condition of the plants looks poor, especially in vineyards, which require relatively intensive husbandry that could not be provided during the past year. This is particularly the case in public sector orchards and vineyards, which were virtually abandoned.

For detailed assessments of the damage to and current status of agriculture and agribusiness assets see the World Bank/FAO report “Kosovo Damage Assessment in Agriculture, Livestock and Animal Health Services” released in July 1999, the World Bank/FAO report “Kosovo: Damage and Needs Assessment in Agriculture” released on 20 September 1999, the “Review of the Agricultural Sector – Kosovo” March 1999 by Philippe Chabot for Mercy Corps (an updated version will be available from Hershel Weeks at Mercy Corps soon) and “Rapid Food Economy Assessment of Kosovo Province” dated 15 July 1999 by Mark Lawrence for WFP/FAO (an updated version will be available from Lawrence very soon). For details on livestock production (WP1), farm machinery (WP2), agro-processing (WP3), irrigation (WP4) and wood products (WP5) see the Working Papers for and the main report of the World Bank/FAO “Programme for Reconstruction of Rural Economy” July/August 1999. These and other currently available reports are included in Attachment C.

It is important to note that the extent of damage to personal property and agribusinesses varies considerably by geographic area. The greatest damage tends to be in the west central area, where the KLA originated, and the area with the most prolonged conflict. Unfortunately, the greatest damage occurred in some of the best agricultural areas. Damage and losses in traditionally Serbian areas tend to be less.

As a result of the above scenarios, agriculture and agribusiness in Kosovo currently has the following characteristics.

Production Agriculture

Demographics -

- More than 50% of the population of Kosovo is under 25 years old, 70% under 30;
- The average number of family members in a household is around 10 with an average number of farm workers per family of 3.7;
- Of the total population of 1.7 million 65-70% (1,200,000) live in rural areas or towns of less than 5,000 inhabitants and 90% of that population is engaged in agriculture/agribusiness related activities;
- 60-70% of pre-war total population of 1.9 million were engaged in agriculture/agribusiness related activities and agriculture and agribusiness accounted for at least 35-40% of total GDP in 1997, the last somewhat “normal” year;

Land Use -

- The average producer has a small (3.2 – 3.7 ha.) farm, with an even smaller amount of cultivatable land (1.6 – 1.7 ha.) broken up into 4-6 different plots; there are only around 680 private farms with more than 10 ha. and 90% of farmers have less than 5 ha.;
- Total population divided by the amount of agricultural land is low at about .34 ha. (577,000/1,700,000), for cultivatable land only .24 ha. (400,000/1,700,000); and for tillable/crop land less than .17 ha. (290,000/1,700,000);
- Based on 1995 data, of total agricultural land of 585,000 ha. (different source from above) 50% was cultivatable fields and gardens, 32% was pasture, 15% were meadows, 2% were orchards, and 1.5% were vineyards;
- There are around 76,500 ha. of irrigated land or 26% of cultivatable land; estimates of the status of irrigation systems vary, but most report that they can be recovered with only modest (\$25 million as per the World Bank) investment versus the importance of the system for value added products production and assuring an annual crop;
- Two thirds of the agricultural land and 90% of the cultivatable land is in the hands of private owners, but significant land title problems very likely to exist;
- Kombinats and cooperatives control less than 10% of arable land, but most agribusiness capacity/assets, especially those of a larger scale; however, this land may be some of the best in Kosovo for commercial production, and kombinat land probably represents some of the best potential for near term non-subsistence production;

Production -

- Cereals, primarily wheat and corn, are grown on 70% of the cultivatable land with around 100,000 ha. each planted in the mid-1990s; other important crops are fodder crops such as alfalfa (35,000 ha.), vegetable crops (26,000 ha.) and vineyards (9,000 ha.);
- An estimated 70% of total cultivatable land was left fallow in 1999;

Losses -

- The loss of most livestock is a major blow to producers since livestock products are reported to have formerly accounted for around 50% of producers' food supply;
- The majority of producers have few remaining assets and are faced with major housing, farm building and equipment and livestock replacement costs; they are in a very weak position to survive through the '99/'00 winter much less plant their winter wheat or spring crops and replace their livestock.

Economics -

- Only about 50% of farm families (58,000) sell a significant amount of their production for cash, since most production is consumed on the farm; in 1997 the average rural family self produced 85-90% of their food needs; of those who do sell part of their production sales rarely exceed 30% of their limited output;
- Crop yield per hector, feed conversion ratios for meat production and milk production per animal achieved are well below international averages, and along with the

agriculture/agribusiness GDP, have declined in recent years due to producers inability to purchase quality inputs such as fertilizer, crop protection chemicals, quality seed and breeding/layer stock, and minimal use of concentrates for meat and milk production;

- With mostly small plots of land growing primarily low value cereals plus a few livestock, all operating at relatively low levels of output and efficiency, plus a large family, it is questionable if small holder agriculture can, by itself, support more than a return to a higher level of subsistence agriculture, and will not be able to make a significant contribution to improving in rural per capita income over that of the late 1980s; a focus on higher value per hector products and higher value added processing through the utilization of local labor is called for;
- Forestry resources have been seriously depleted in recent years due to exploitation and mismanagement, and forestry's contribution to agricultural GDP (3%) does not reflect its potential;
- Kosovo has experienced a long term deficit in food production (said to be as high as \$250 million/year including DM 200 million of dairy products) and is a net importer of cereal and animal products but was, in the past, an exporter of wine, apples, chestnuts, potatoes and beans; and
- In 1999 farm income accounted for less than 11% of total income for farm households with aid accounting for 40%, off farm income 20% and remittances from relatives living overseas 30%.

Agribusiness

Past

- Veterinary services were provided by the private sector working out of some 28 stations; however these have been looted of their equipment and supplies, and are no longer functional;
- In general kombinat facilities have been very poorly maintained, have operated at low capacity utilization and much of the recent vintage equipment was looted; however, current "employees" have put many of the facilities back into at least partial operation and believe they can restart much of the operation with a modest amount of investment;

Present

- Most private sector producer input supply businesses have stopped operating due to the lack of cash paying customers, the loss of assets – either inventory or buildings, the lack of needed inputs, and a shortage of capital to restart the business;
- Most private sector output marketing and processing business are also not operating due to damaged or looted facilities, the lack local inputs and a shortage of capital to replace assets and/or buy inputs; a significant market for food products does exist and is currently being supplied primarily by imports;
- The most prevalent output related private sector agribusinesses, in both number and those currently operating, are flour mills;
- Many small private sector bakeries are also operating;

- Some kombinats have started work using inventory on site when they returned to the facility, however, this will be short lived;
- Kombinat ownership is uncertain; former employees “working” at the facilities (and selling any remaining inventory) believe they are the rightful owners; on paper most of these facilities are owned by Yugoslav entities; kombinat ownership and control is a major issue that needs to be accommodated ASAP so these facilities can be utilized to help resurrect Kosovo agribusiness;
- Some facilities are claimed by Serbian Kosovars and are therefore being guarded by KFOR to avoid conflicts with ethnic Albanians who worked there pre 1991; some facilities have the best buildings in the area and are therefore being used by KFOR;
- Cooperative assets are not well inventoried, but some are extensive, e.g., the layer cooperative in Lipjan;
- Many would say that at the least kombinat and cooperative assets belong to the people of Kosovo, not just the employees who happened to work there in 1991;

Future

- Private sector businesses distributing imported food products sprung up almost immediately after the bombing/fighting stopped, and the market is currently well supplied for those who have money to buy;
- The greatest private sector interest in and potential for quickly rebuilding agribusinesses seems to be for yogurt and dairy processing operations and for layer flocks; the current shortage of raw milk can be overcome with imported powder or condensed milk, and 18 week old layers can be imported;
- Private sector agribusinesses can play a very important role in reestablishing a domestic supply network for agricultural inputs such as planting seed, fertilizers, crop protection chemicals, layer and broiler chicks and animal health care services;
- Some pre 1991 employees of cooperatives, dominantly ethnic Albanians, are at their offices and ready to work, but have no paying customers or sources of input supplies;
- Pre 1991 employees, dominantly ethnic Albanians, of the kombinats are also ready to work, but usually have minimal to because of the deteriorated state of the facility, the lack of raw materials and a lack of finance to restart the business; they are also not being paid unless they are able to market inventory found when they took over;
- Many of the kombinat facilities can be restarted with a modest amount of capital when compared to their potential output;
- Kombinat facilities, along with the smaller private sector facilities, probably represent some of the most important assets available in the near term to provide inputs to production agriculture, and food products for the population;
- Many kombinats have considerable land that could be quickly returned to production on a commercial scale, and some, especially the wineries (e.g., Kosovavera has DM 10 million worth of bulk wine in storage), have valuable inventory on hand;
- Many kombinat facilities represent an opportunity to quickly return larger scale agribusinesses into suppliers of much needed producer inputs such as animal feed, planting seed and layers, buyers of producer output such as dairy products and animals

for slaughter, suppliers of domestically-sourced food products such as vegetable oil and margarine, meat and sausage products and dairy products such as yogurt, fresh milk and cheese, and a source of much needed export revenue such as that generated from the sale of wine, processed vegetables, and in the intermediate term, processed fruit products;

- Kombinats are a high leverage opportunity for the injection of updated agricultural and agribusiness technology and know-how since they tend to have a fully integrated operation running from inputs production, land for production, and output processing for the same products;
- Kombinats can also play an important role in supplying inputs and technology/know-how to private sector producers; the cost of these inputs would then be deducted from the delivered product, thus providing a source of finance to private sector producers; the wineries sourced around half of their grapes from the private sector, the vegetable processing kombinat purchased nearly all of its vegetables from private sector growers, and the vegetable oil processing kombinat purchased all of its sun seed from private growers, at one time accounting for nearly 10,000 ha. of production;
- The management and workers of kombinats and cooperatives have not functioned in that capacity for at least eight years; it is said the kombinats were not that well managed in the past since the tendency was to return all proceeds to the workers or farmer owners rather than to reinvest in or build the business, and in social sector firms there was a tendency for few to work while many benefited;

For an overview of available information on the major kombinat and cooperative facilities see Attachment D.

iv) Mid 1999 until Fall 2000 - Emergency Distribution

Due to the above mentioned conditions severe food, shelter, farm equipment and production input shortages would exist for fall winter wheat planting, spring planting and herd/flock rebuilding. The estimated 240 NGOs/PVOs working in Kosovo, especially Mercy Corps International, Action Against Hunger, World Vision International, Catholic Relief Services, the Mother Teresa Foundation and CARE are very active in humanitarian relief. FAO/TCOR is responsible for coordinating the relief efforts of the NGOs/PVOs and those of the donors. Nearly all donors are active in Kosovo and focused on humanitarian relief and immediate rebuilding efforts. This includes USAID's DART program and to a somewhat lesser extent OTI. The various United Nations agencies are very active, especially WFP, UNHCR, FAO, etc.

v) Fall 1999 until 2005 - Rebuilding

The World Bank and FAO are working on a near term rebuilding program and will be sponsoring a donor's conference the 28th of October to discuss the program and solicit contributions. Their recommendations are contained in a September 17 document "Kosovo Recovery Program, Re-Launching the Rural Economy" included in Attachment E. This program is envisioned to last for four years and consist of: a) reconstruction aimed at jump-starting

agriculture and the rural economy, b) support to private sector development in rural areas, and c) support to institutional capacity building.

The program is to be implemented in three periods marked by:

- 1) 12/99 – 6/2001, replacing war damaged assets, primarily livestock (mostly cattle) and agricultural machinery to those most in need, mostly via grants administered by NGOs, as well as irrigation rebuilding and rural infrastructure (schools, electric power supply, health centers and roads) replacement via grants,
- 2) 7/2001 – 12/2003, private sector activities and institution building including privatization of social enterprises and post privatization financial support, the development of public works, pension and welfare schemes, and the development of rural financial institutions and non-bank/micro finance entities, and
- 3) 1/2004 continued assistance to be determined, but likely to include institution building.

For an overview of the WB/FAO program as of September 17, 1999 see Attachment E. This WB/FAO program will hopefully be more detailed by the time of the donors conference.

The European Commission is responsible for Pillar Four – Reconstruction - and is therefore developing agriculture reconstruction programs. The main program they are currently working on is a revolving rural micro credit program. They are also discussing some type of SME program.

The revolving micro credit program will be patterned after one operating in Albania. An expert from EBRD will complete an evaluation of the Kosovo legal environment (such as it exists) by the end of October. The EU managers responsible for the program say they want a pilot operation functioning by November 1999 and a fully functioning entity by March 2000. The facility would take deposits and make loans of from DM 10,000 to 200,000. It would have a farmer focus but would consider loans to non-farmer entities. How it will avoid competing with the eventually entry of private sector lenders, and if it will require collateral from farmers is undetermined.

Exactly how the WB/FAO and EU programs relate and coordinate with each other is TBD. It is clear however that both are producer focused and not aimed at developing a competitive and significant agribusiness private sector, nor have they considered ways to rebuild agriculture and agribusiness that are longer term sustainable. Both programs have a small-scale orientation.

Merci Corps is working on a concept involving Sustainable Development Centers using UNDP funding of around \$1 million. The Centers will register firms, provide business planning and market research assistance as well as business advice, accounting services and micro credit to all types of SMEs. The centers will focus on start-ups, and will encourage grouping of business interests.

vi) 2005

This is a useful time target, or at least a major milestone, for significant restructuring to be completed and a high degree of sustainability to be achieved. By this time the naturally entrepreneurial private sector should be extensively rebuilt and the most competitive entities reasonably well established. Agriculture and agribusiness should exhibit the following characteristics:

- 1) Making good progress toward reasonable Kosovo agricultural products economic self sufficiency, i. e., the value of imports and exports are coming into balance;
- 2) The number of subsistence producers will be dramatically reduced;
- 3) Agribusiness will be providing employment to a large labor force;
- 4) The average value of production per hector will have increased;
- 5) Agricultural productivity and efficiency will have significantly improved;
- 6) Private sector agribusinesses will be competitive suppliers of producer inputs and efficient buyers and processors of agricultural output;
- 7) Those cooperatives and kombinats that have been able to develop and implement successful business models and enterprises will have become self-sustaining; and
- 8) Donor, NGO and other outside assistance will be at a minimum.

C) Sector Employment

Through much of the late 1980's and 1990's 60 to 70% of the active population was involved in both production agriculture and agribusiness.

From the late 90's to the present agriculture production has been falling rapidly, land in production declined as did livestock numbers, the urban population increased and the rural population decreased. Due to the diminishing primary production base, Kosovo became even more of a food deficit region and was a net importer of cereals and animal products. Past surpluses of wine and some types of fresh and processed fruits and vegetables (e.g., potatoes and beans) diminished dramatically. The decline of kombinat and coop activities, and the expulsion of ethnic Albanian management and employees in the early '90s further reduced employment. As a direct consequence of war, which started in March 1999, agricultural production and agribusiness activities have come to almost a standstill, and currently provide very minimal formal employment.

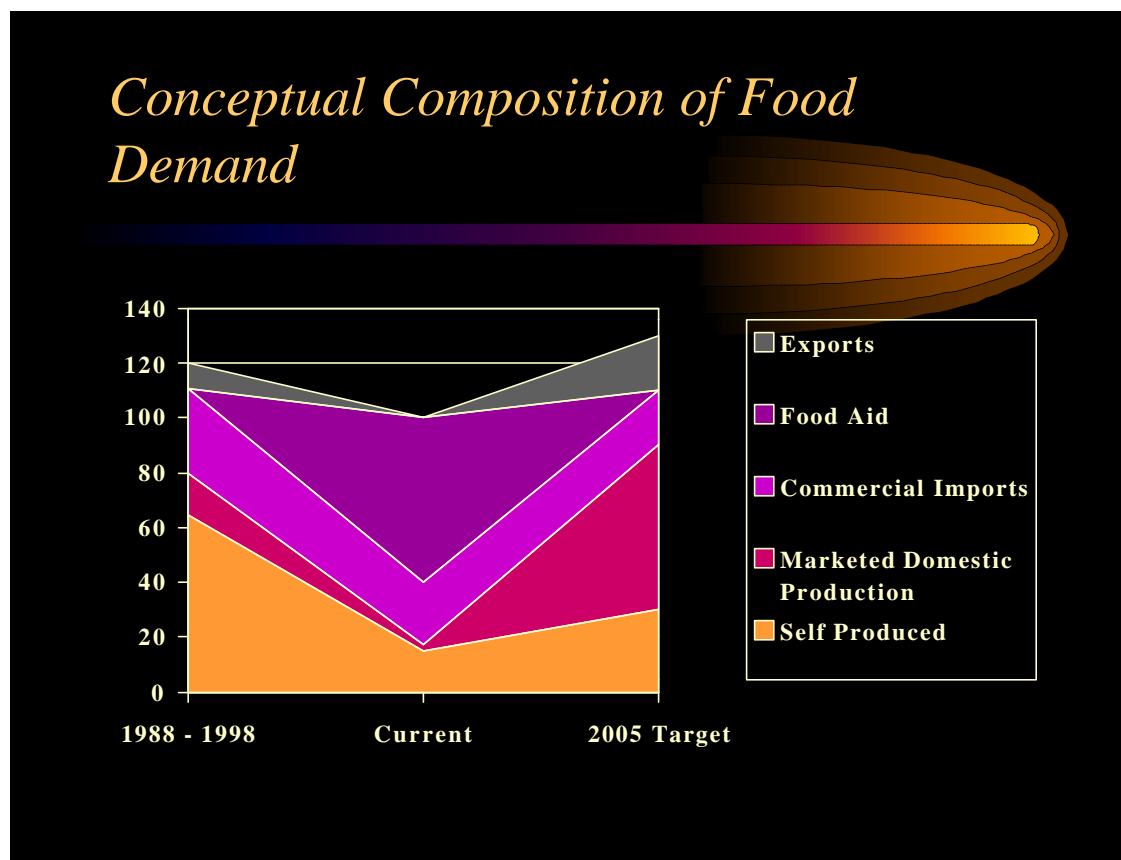
In the future, Kosovo agriculture and agribusiness, with appropriate agronomic, technical, managerial and financial support, can develop into a strong and viable sector. However, this will require moving from a predominately subsistence agriculture structure with nearly defunct agribusinesses, to a structure where commercial agriculture is important and both production agriculture and agribusiness are focused on high value crops and products. This model could provide viable employment for 30 to 40% of the active population.

D) Conceptualization of the Food Chain

Conceptual presentations of three stages of Kosovo agriculture and agribusiness development are presented in Slides 1 through 4. These graphics use only 1988 – 1998, Current, and the 2005 Target as time periods. They illustrate in conceptual form the Composition of Food Demand, the Composition of Food Processing and Marketing, the Composition of Food Production and the Composition of Input Supply. The graphics take a market backward viewpoint, and attempt to relate the various parts of the food chain to each other. The basics of these presentations are explained under each slide.

The authors believe that these conceptual illustrations provide a useful picture of the past, current and future structure and interrelationships of the food chain in Kosovo.

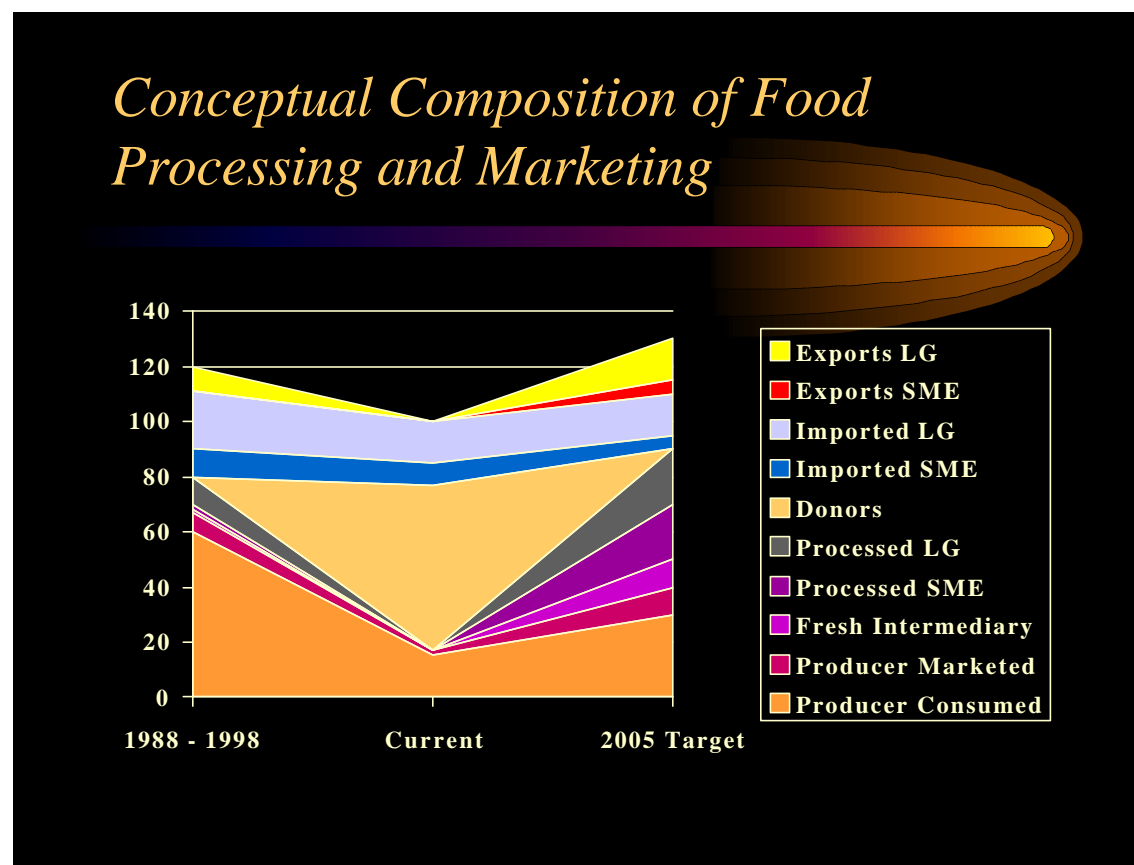
Slide 1



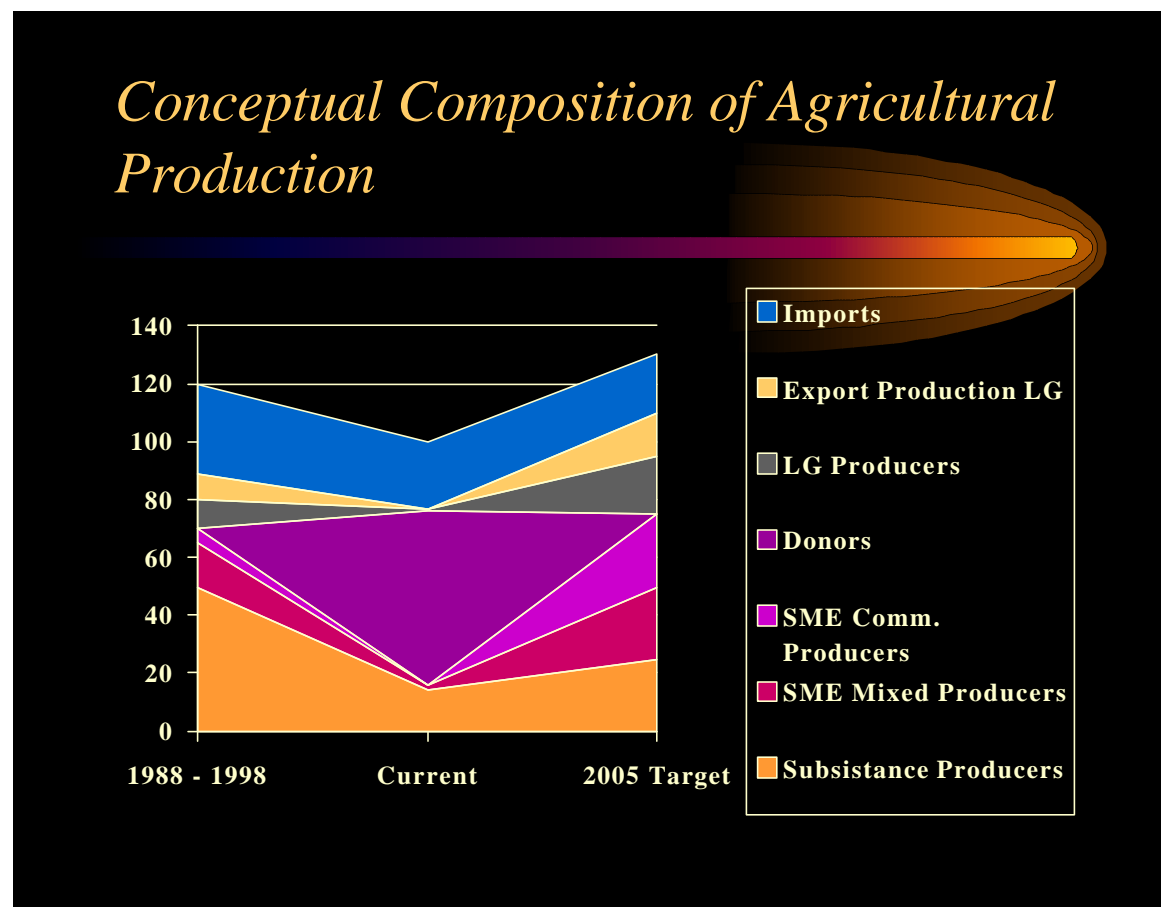
Food Demand: In the '88 – '98 time period food demand was supplied primarily by subsistence production and commercial imports; marketed domestic production was modest; exports represented a small portion of imports. Currently primarily food aid, a modest amount of food imports, and a small amount of subsistence production supply food demand and very minimal marketed domestic production; there are no exports. In the target period marketed domestic production supplies a major portion of demand, subsistence consumption is half of the '88-'99 level, there are almost no donor imports and commercial imports and exports are nearly in

balance. The total volume of agricultural related products is down currently but recovers to a level higher than the '88 – '99 period by 2005.

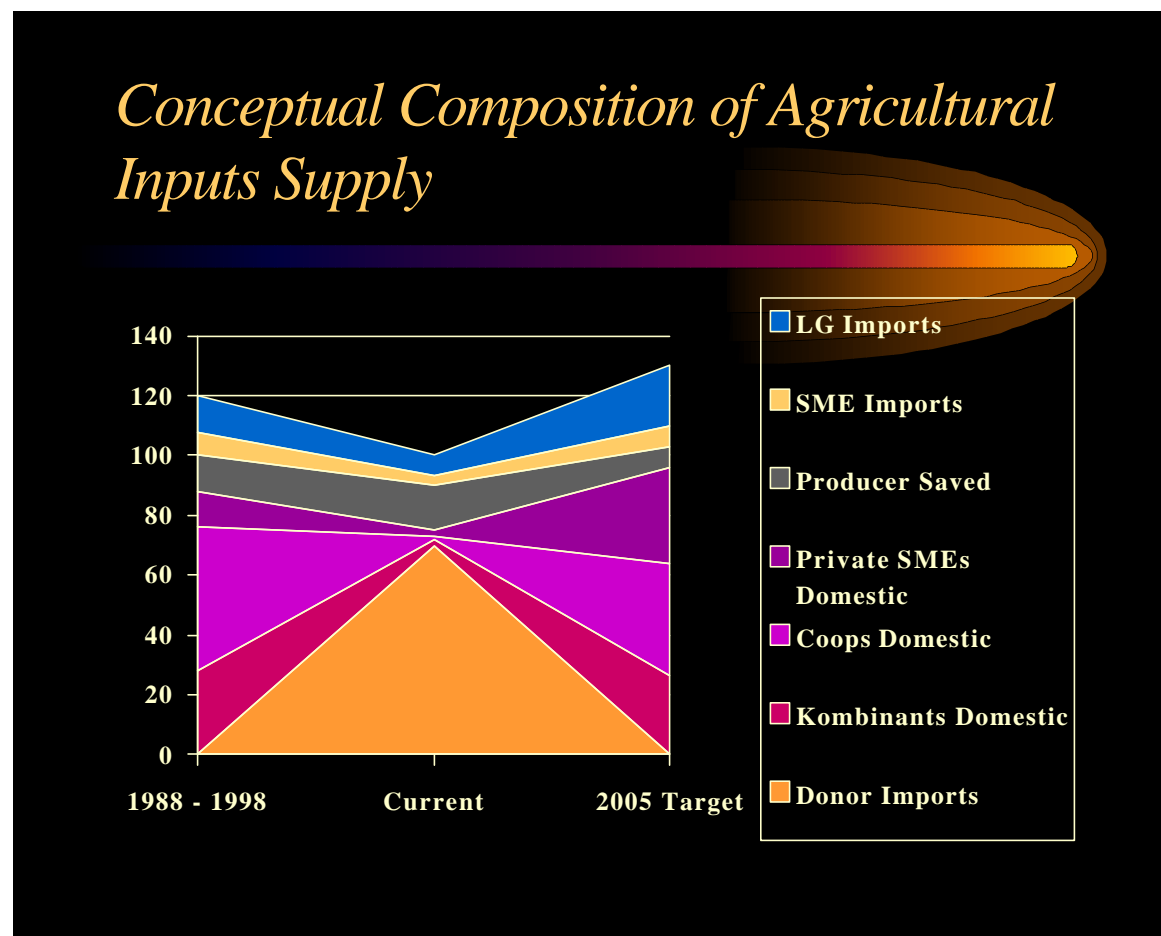
Slide 2



Food Processing and Marketing: In the '88 – '98 time period processing and marketing was dominated by on farm, for self consumption, storage and processing; large social enterprises like AgroKosovo imported significant amounts of product; small private sector processors, producer marketed fresh products marketing and large processor domestic marketed production was modest; there was minimal fresh intermediary marketing or SME processed product marketing. Currently the majority of food is distributed by food aid; large firm commercial imports are very modest and SME imports quite small; other processing and marketing is insignificant. In the target period producer consumption is half of the '88 - '99 period, the value of products processed by large and medium private firms is significant, large, private importers and exporters are playing a significant role, and the value of producer marketed and fresh product intermediaries sales is modest; SME importers and exporters are playing a small role. The total volume of agricultural related products processed and marketed is down currently but recovers to a level higher than the '88 – '99 period by 2005.

Slide 3

Agricultural Production: In the '88 – '98 time period production was dominated by subsistence producers and to a lesser extent supplied by imports; small producer marketed production and large producer production were important; there was a small volume of export production by large social enterprises and a small amount of small commercial production. Currently “production” is from donor and NGO imports and a modest amount of commercial imports; subsistence producers supply a modest amount of their own needs; there are no large or small commercial producers. In the target period production is more or less equal between subsistence producers, mixed (subsistence/commercial) small producers and small commercial producers; large commercial producers are playing a significant role producing for the domestic market and especially production for export. The total volume of production is down currently but recovers to a level higher than the '88 – '99 period by 2005

Slide 4

Inputs Supply: In the 1988 – 1998 period cooperatives played a major role in inputs supply followed by the kombinats; large social sector importers, producer saved inputs and private SMEs, and to a lesser extent SME importers played a significant role. Currently the vast majority of inputs are being supplied by donors and NGOs; producer saved inputs play a small role and to a lesser extent imports by large firms. In the target period inputs are supplied by sustainable coops, private SMEs and to a lesser extent sustainable kombinats; large importers are playing a significant role and private SME imports and producer saved inputs are very modest. The total volume and quality of inputs is down currently but recovers to a level higher than the '88 – '99 period by 2005, especially in quality.

IV. Subsector Analysis

The following section describes the volume produced versus demand plus other useful information for the main types of grain produced in Kosovo. Important opportunities and constraints for the development of the grain subsector are also provided.

A) Grains

i) Production Quantity and Domestic Production Versus Demand

Wheat	1989	1999	2005
Demand (MT)	535,000	420,000	550,000
Production (MT)	217,000	78,000	550,000
Deficit (MT)	- 318,000	-342,000	0
Yield Assumptions (MT/Ha.)	3.0	2.6	4.0
Hectares Required - to meet total demand	178,333	161,538	137,500
Hectors Planted	83,461	30,000	

The estimated consumption rate of wheat for flour in Kosovo is 550,000 MT/year. Kosovo, with a market driven agricultural program, has the potential to produce quality wheat at a world market competitive price. The price for wheat in March 1999 was \$140/MT in Kosovo. At the same time US wheat was \$118 F.O.B. US Gulf. Today wheat prices in Kosovo are based on the world market price of \$101 F.O.B. US Gulf, as there is no domestic wheat available. Shipping charges will run approximately \$45 to \$55/MT. In the future Kosovo will and should import approximately 30% of its requirements or 165,000+ MT/year. Utilizing proper agronomic practices the remaining 380,000 MT could be achieved from 100,000 hectares of land. However, the shortage of arable land in Kosovo must be considered, as wheat will not generate the return per hectare that other more valuable crops that can be produced on Kosovo soil could provide.

Maize	1989	1999	2005
Demand (MT)	424,640	217,905*	520,000
Production (MT)	209,000	51,000	520,000
Deficit (MT)	-215,640	-166,905	0
Yield Assumptions (MT/Ha.)	3.0	3.0	6.0
Hectares Required - to met to- tal demand	141,547	72,635	86,660
Hectors Planted	70,000	17,000	

* Demand is based on the number of livestock consuming maize as animal feed.

Maize in Kosovo is used entirely for animal feed. From 1980's until just prior to the war in March of 1999, Kosovo imported yellow maize to supplement the domestic supply. The demand number for maize is based on feeding a balanced "least cost" formulation maize to the reported

animal population. With good agronomic practices and utilizing up to 90,000 hectares of land, production of 596,000 + MT could be achieved. This would require a yield of 6 MT per hectare, a very average yield in many countries. (The average in the US is 8.3 MT/hectare, non-irrigated.) The production number shown above for the year 2005 is based on the amount of maize needed to feed the average number of cattle, milk cows, sheep, goats, swine, and poultry on farms prior to 1997, based on the consumption level of each species, and utilizing a very conservative maintenance level ration.

Barley	1989	1999	2005
Demand (MT)	N.A	5,500	60,000
Production (MT)	44,800	3,575	60,000
Deficit (MT)	N.A	1,925	0
Yield Assumptions (MT/Ha)	2.8	2.8	3.2
Hectares Required - to meet total demand	16,000	1,964	18,750
Hectors Planted	16,000	1,276	

The barley market derives primarily from the brewery in Peje. However, barley can also be used in the milling industry as a substitute for wheat and in livestock feed rations as a substitute for maize.

ii) On Farm Storage

On farm storage in Kosovo today consists of a very small shed that might hold enough concentrate to feed 1 cow and a calf for 3 to 4 months. Since the conflict, there is little if any off-farm private storage facilities remaining, except limit capacity at flourmills. A program is needed to develop small on-farm storage facilities for wheat and feed grain usage. Utilizing round galvanized corrugated grain bin structures designed for the medium and larger farming operations could achieve this. It is not necessary, nor would it be economically sound to use a “one size fits all” approach for a viable on-farm storage system.

iii) Key Opportunities and Constraints

Key Opportunities for Grain Production:

- There is a very large demand for wheat based products, primarily bread, in Kosovo.
- Improved agronomic practices and inputs could double the yield of wheat, maize, barley and sunflower.
- Maize has strong demand as a feed grain and this demand should increase sufficiently over the next 10 years.
- Irrigation available in specific areas offers crop selection flexibility and production reliability.
- Barley can substitute for maize as a feed grain and/or for the brewing industry.
- The brewery is likely to have an ongoing demand for barley.

Major Constraints to Grain Production:

- Significant financing will be required over a 4-5 year minimum term to replace tractors and other implements.
- A long-term financing package may be required for the purchase of land by those who want to expand their holdings into more economical size units. This will also require resolution of land tenure issues.
- The limited arable land available requires careful crop selection to maintain the highest total value of production and rate of return. Wheat does not always fit this criterion, especially on irrigated land.
- Due to past serious mistreatment, most farmers have a high degree of mistrust of anybody outside their immediate family and close friends, therefore it will be challenging to get them to move from subsistence to a more commercial orientation.
- For at least the next two years, producers will be faced with the huge task of supplying their basic needs and replacing their destroyed assets, and will find it difficult to focus on new ideas and approaches to grain production.
- Most producers in the region grow similar crops so those that are more efficient can supply grain to the Kosovo market at a lower cost than local production.
- Lack of modern agronomic practices by the present farmers, and the very likely slow development of government institutions which support agriculture, means effective, well coordinated, private extension type services will have to be provided by input suppliers, output buyers, a viable coop structure or companies in the business of providing farm management services.
- Marginal rainfall of 600 – 800 mm requires sound soil management and/or irrigation.

B) Livestock**i) Dairy**

Dairy production provides Kosovo agriculture one of its greatest challenges, and potentially greatest rewards. Kosovo has the natural resources and young population with the entrepreneurial spirit to develop a competitive dairy subsector focused on the domestic market and the Balkan area. There is large consumption of dairy products, including whole milk, yogurt, cheese and butter. Most of the commercial supply has been imported. A successful dairy subsector will require moving dairy production from current 1 cow with 1 calf subsistence (self-consuming) production to larger, more economically viable herds of 10 or more milking cows.

The following steps are needed to achieve a successful, self-sustaining subsector:

- Define the “milk sheds” (a geographic radius within which milk can be economically collected) of Kosovo - e.g., Pristina, Podujeve, Prizren, Kline and Gjakove.
- Offer financing and technical assistance to carefully screened dairy processors who want to expand or replace their war losses.
- Offer financing and technical assistance to carefully screened processors that purchase raw milk from producers, processors dairy products and market within the “milk shed;”

- The processors should be able to provide daily raw milk pickup from the producer, perform quality checks and make frequent payment for the raw milk.
- Establish feed mills in or near the “milk sheds” that produce balanced supplements to go with local forage. The feed mill or dealer will need to provide nutritional and general animal husbandry assistance to producers. One way is via quarterly or semi-annual workshops stressing quality control and market news.
- Reestablish at least one private veterinarian service in or near each designated “milk shed.” The veterinarian will provide artificial insemination and advise on the selection of proper breeding stock. Some of the preferred breeds are the Frisian, Simmental, Brown Swiss and Jersey.
- Establish good communication links between producers, processors, feed millers and veterinarian services.
- Support producer linkages and market news regarding domestic and regional finished and raw milk markets.

Key Opportunities for Dairy Subsector Development:

- There is high demand for fresh dairy products such as yogurt, cheese, butter and whole milk in a young and growing domestic market.
- Kosovo is said to import at least DM 200 million of dairy products annually.
- Several entrepreneurs are interested in rebuilding/refurbishing dairy processing plants.
- Excellent pastureland and arable land for grain production and fodder is available.
- Approximately 42% of the herd (male calves) can be sold as “veal” that is in high demand in Kosovo, thus providing a consistent source of additional income.
- The range of products that can be produced from milk allows processors to respond to changing demands.
- Donors are providing top grade dairy cows (bred heifers) in the next 3 months, assisting the rapid rebuilding of herds.
- As dairy production increases so will the rural labor force, particularly in the commercial dairies as milk production, processing and distribution is rather labor intensive.
- Processing companies can be established quickly based on imported powdered or condensed milk and shift to fresh raw milk as that becomes available.

Major Constraints to Dairy Subsector Development:

- A large amount of intermediate term (2 – 3 years) financing will be required for herd and milking equipment replacement.
- For commercial production, almost the entire national herd must be rebuilt.
- A large amount of financing will be required for milking parlors and processing plants.
- A consistent supply of quality legumes and feed grains is required for competitive cost production.
- The sanitary requirements are significant for a safe milk industry, thus some controls may be required.

ii) Poultry

In the '90s, poultry production was a very important component of agricultural production in Kosovo. Pre-1989 there were over 4.5 million poultry, and up to 1997 there were 3.2 million poultry. Today over 60% of the poultry has been lost due to the conflict.

- Egg production today comes primarily from small family owned farms with 10-12 layers. Many of the larger 2,000 to 27,000 layer (commercial) operations were severely damaged during the war.
- The large cooperative/kombinat layer operations are not producing due to having no birds, no input supplies, and poor management and no maintenance over the past 10 years.
- There are several large 250,000 to 400,000 layer operations in Kosovo. The "coop" in Lipjan has several 25,000-bird houses refurbished and is ready to get back into production. The other large layer operation, a kombinat, is located in Gjakova and, until recently, was leasing part of its facilities to a private party. All that is lacking to put these units back in operation is capital to do maintenance/purchase inputs, acquire birds and buy feed.
- There are several privately owned, 6,000 to 27,000 layer operations located in Gjakova, Ferizaj, Peje and Gjilan that could be back in production with the aid of a financial package.
- While there are currently no hatcheries or day old chick production units in Kosovo, there are several empty poultry buildings that could be utilized for hatchery businesses, i.e., day old chick production and pullet production for layer and broiler operations.
- Commercial broiler production has been virtually abandoned since the conflict.
- There are currently no commercial slaughter/processing facilities available to producers of broilers.
- The quality of imported frozen chicken parts (primarily leg and thighs) is questionable.

The poultry sector seems to offer great potential because of strong demand, the ability to relatively rapidly and inexpensively reach optimal production levels and the short production cycle. From the production of a day old chick by the hatchery through pullet production and finishing with broilers the cycle should be only 56 days.

The required steps to successfully develop a viable poultry production sector are:

- Review all existing 2,000 birds and upward private facilities as to their viability of operation, physical facilities and management ability;
- Develop a supplier or buyer based finance package for those producers that meet pre-established criteria;
- Review all the large cooperative/kombinat poultry operations, and select those that have acceptable physical facilities and can be put back in operation with minimal investment; carefully analyze the management, and if possible check past performance;

- Assure that there is a close and reliable feed mill or feed dealer with the ability to provide at least weekly feed service; they must also provide technical advice regarding feed usage and antibiotic applications;
- Make sure feed grains such as maize, barley, wheat are in good local supply;
- If the larger facilities have their own feed mill, the equipment must be in good condition and storage facilities available for up to 3 months production; this will include whole grain maize, sunflower meal, meat & bone meal, fish meal, all ingredients both micro and macro along with vitamin and mineral supplements;
- Assure a good supply of non-contaminated water;
- A hatchery operation and day old chick operation must be available to assure a supply of replacement stock to maintain production levels;
- A strong, private veterinarian service must be established;
- A slaughter/processing facility must be available or developed for broiler operations; and
- Strong communication must be maintained between producers, input suppliers, processors and domestic and regional markets.

Key Opportunities for Poultry Subsector Development:

- There is a strong domestic and regional demand for eggs and poultry meat.
- A comparatively fast return on investment can be achieved and total investment is less than for operations involving larger animals.
- Less space is required than other livestock programs.
- Producers can rapidly adjust to market trends due to the short production cycle.
- Poultry can employ a significant labor force.
- Small producers can manage broiler grow out operations.

Major Constraints to Poultry Subsector Development:

- A solid, tightly monitored, financing package is required.
- A reliable and consistent quality supply of raw material for feed is required.
- Successful and highly competitive poultry production requires top technical skills from personnel.
- The physical facility must be kept clean and efficient.

C) Fruits and Vegetables

The horticultural sector formerly experienced a surplus in some processed fruits and vegetables. Apples, plums and pears provided the excess in fruit production and potatoes, beans and cabbage for vegetables. In 1995 there were 26,000 hectares of vegetable crops and 11,000 hectares of orchards. Through years of mismanagement, removal of assets and the war, Kosovo production has not kept up with domestic consumption. See the table below for the 1997 and 1998 annual deficit for several food products including fruits and vegetables. This deficit resulted in the importation of fruits and vegetables from Yugoslavia, and to a lesser extent neighboring countries. There has been a 60%+ reduction in production of fruits and vegetables in just the past 3 years. Fruits and vegetables can be an excellent, high value per hectare cash crop for Kosovo's agricultural sector.

Description	Potatoes - MT		Beans – MT		Vegetables -MT		Fruits –MT	
Year	1997	1998	1997	1998	1997	1998	1997	1998
Production	51,200	52,000	8,650	3,400	92,650	45,000	68,300	35,000
Consumption	66,444	61,732	18,193	17,342	95,679	91,770	100,683	99,820
Deficit	-15,244	-9,732	-9,543	-13,942	-3,029	-46,770	-32,383	-64,820

Key Opportunities for Fruit and Vegetable Subsector Development:

- Horticulture offers the highest return per hectare available in the agricultural sector if sound production, processing/packing and marketing practices are utilized.
- There is an excellent irrigation system (covering 4,560 ha. around Gjakove) already in place in the main growing areas, requiring only minor repairs.
- There is strong demand for fresh fruits, processed fruit products such as preserves, and fruit drinks, domestically and regionally, and if the quality and price is competitive, internationally.
- There is also high demand for fresh and processed vegetables in Kosovo and the Baltic region, and selected fresh vegetables internationally.
- Vegetable production can be adjusted on an annual basis to accommodate evolving market demands domestically, regionally and internationally.
- Fruit and vegetable production and processing is very labor intensive.
- There is great potential in organically grown fruits and vegetables, they are high profit margin products and international demand is growing.

Major Constraints to Fruits and Vegetable Subsector Development:

- The cost (estimated at \$25 million by the Bank) and, more importantly the coordination required, of rehabilitating the irrigation system;
- The financing required to reestablish orchards, and bring processing plants up to minimal standards.
- The lack of a perishable products market system, especially from producers to processors.
- The need for new packaging systems, e.g., glass pack baby peas, as required by the market.
- The difficulty and cost of developing a private extension service to obtain maximum production and product quality from private growers.
- Identifying and developing effective, efficient and reliable intermediaries in the market chain.
- The current lack of a seedling production facility.

D) Other

Wine

In 1995 there were around 9,000 ha., or nearly 3% of cultivated land, in vineyards. These hectares were about evenly distributed between five kombinats and private growers. Therefore, private growers marketed high value production from around 4,500 ha of vineyards. The

kombinats had at least 1,000 employees and the wine industry is said to have provided direct and indirect economic benefits to some 70,000 people, 40,000 in Rahovec area alone. In the late 80s wine exports were worth around DM 40 million or \$22 million. The wine district is in the middle of one of the most heavily damaged regions with wineries in Rahovec (50% of total capacity), Suhareka, Krusha e Vogel and Gjakova, and a large vineyard in Malisheva.

The physical facilities of the four big wineries suffered only minimal damage and can probably be put back into basic operation for a small cost versus their market value. About one-third of the kombinat vineyards must be replaced, but the other two-thirds can be brought back into production for the fall '00 crop, but with reduced yields. The status of private vineyards is less certain, but it is believed they can be brought back into production, but with considerable rehabilitation. Several of the wineries have considerable early 90s vintage wine in storage that can be bottled and sold, or used as collateral for loans, for rebuilding and operating revenue. The wineries have management and staff who are cleaning up and repairing their facilities and attempting to clean and prune the vineyards. However, the lack of equipment (especially tractors), fertilizer, petrol and crop protection chemicals hampers vineyard upgrading work.

Kombinat ownership issues are most evident at the wineries since they have physical facilities and inventory of substantial valuable and are comparatively undamaged. It is questionable if these assets belong to the comparatively few former employees who worked there in the early '90s.

The wineries represent one of the best opportunities to quickly create employment, demand for high value produce from a large number of private growers and exports. The cost of putting the wineries back into business is modest versus the value of their sales and their economic benefit to Kosovo agriculture and agribusiness. Therefore, an expedient way to put the wineries back into operation while the ownership problem is resolved is needed. Once that is resolved, an aggressive rebuilding program for winery facilities and vineyards and private producer vineyards can be developed. The wineries represent the best opportunity to attract foreign investment to Kosovo agriculture and agribusiness.

Flour Milling and Baking

Flour mills and bakeries currently represent the largest component of agribusiness in Kosovo. Kosovars consume 145 kg. (320 lbs.) of flour per capita per year. Most of the wheat production, plus imported wheat, is made into flour. Domestic wheat is said to have supplied around 50% (200,000 MT) of flour requirements in the late '80s. Kosovars consume a large quantity of bread, especially now during difficult times.

There are two large flourmills, one at Fushe Kosovo (200 MT/day milling with Buhler equipment, 3,500 flour and 80,000 MT wheat storage capacity, and a large grain dryer) and one at Xerxe (200 MT/day milling capacity, and wheat storage capacity of 56,000 MT). The Fushe Kosovo mill is currently milling 100 MT/day for NGOs, and is renting warehouse space to NGOs. A manager at the Fushe Kosovo mill says it was a social enterprise, but is now 51% owned by the government (which one?) and 49% by employees. This mill is in very poor condition due to long term neglect, but can be operated at around 50% of capacity. The Xerxe

mill is reportedly toll milling for the general public by returning 62 kg. of flour for each 100 kg. of wheat, or 50 kg. of flour plus 30 kg. of bran for 100 kg of wheat, the bran for use in animal feed.

There are around 20 small, private flourmills in Kosovo, with a capacity of 2 – 3 tons/hour, that produce 72% extraction flour. They have little storage capacity. The authors observed several of these mills in operation but were only able to interview one owner. While most mills we saw appeared to have suffered minimal damage, the one whose owner we interviewed was completely destroyed.

Given the importance of wheat storage and flour milling in Kosovo, a special study on the current status of this subsector, its capacity to store, import and mill local requirements and its financial, technical and managerial needs should be conducted. The future role of the Fushe Kosovo and Xerxe facilities, especially as related to reserve wheat storage must be determined.

There are several large bakeries formerly owned by AgroKosovo. Those in Pristina and Ferizaj are operating or capable of operating. These are large capacity bakeries that can produce between 36,000 (Ferizaj) and 100,000 (Pristina) loaves per day. The Pristina plant is relatively new and is operating at low capacity (3,000 loaves/day) and the Ferizaj plant was producing 20,000 loaves/day for WFP but has stopped, reportedly due to non-payment. The Ferizaj bakery believes it could sell 20,000 loaves/day at its own outlets plus to retailers for DM .40 each (believed to be a sustainable price), but doesn't have funds for wheat, fuel or flour bags and is therefore not operating. The Ferizaj plant is "owned by the workers, not the State" according to management.

Nearly every town has a small local bakery. Most are currently operating by converting donor-distributed flour into bread for local families. Some commercial sales are taking place. But in Ferizaj for example, only 12% of the population is employed, so they have very minimal purchasing power.

It would be useful to do an assessment of the baking industry to determine the role of the large bakeries and the extent to which they would crowd out small local bakeries if put into operation. It is unfortunate to let the large bakeries, with usable facilities and considerable employment potential (Ferizaj currently "employs" 112 people), sit idle.

Oilseeds/Vegetable Oil

In the late 80s there were more than 12,000 ha. planted with sun seeds, with the output being purchased by the "socially owned" sun seed processing plant in Ferizaj. Sun seed production is said to have benefited nearly 5,000 families, or around 50,000 people. The processing company, the only one in the Balkans that makes hydrogenated oil, produced consumer packaged (in plastic bottles blow molded in the plant) refined vegetable oil, hydrogenated vegetable oil and margarine for sale to the domestic and export markets (formerly Albania and Macedonia) and could employ 185 people. The plant has no land of its own so must rely on private producers for its raw material. Currently it is importing and refining crude sun oil from Turkey, Romania and Hungary. The plant has a capacity to process 25,000 MT of sunflower seed per year on a single

shift basis. It has been running at 50% capacity until it can receive funds for a maintenance program to bring the plant up to full production. The plant suffered minimal damage and can be put back into operation at a modest cost – DM 200,000 in the short term and DM 1.8 million for full operation. Key equipment in the plant is of good quality, less than 10 years old and from Alfa Laval and Krupp. The company has an extension department that provides technical assistance to producers, provides crop protection chemicals free on an as needed basis and advances planting seed against future delivery of sun seeds. Funding is needed to do the minimal repairs, buy crude oil until the fall '00 crop, buy planting seed, crop protection chemicals, and fertilizer, and to pay salaries.

While the value per hector of sun seed production is currently rather low, around DM 450, this likely has to do with weak planting seed varieties and inadequate cultural practices. Kosovo is a large consumer of vegetable oil. Crude vegetable oil processing results in meal that can be used for protein in animal feed. The production of sun seed represents a large cash crop for producers, the processing plant could employ nearly 200 people including distribution and extension and domestic production of vegetable oil products would reduce imports and possibly provide a source of exports. The cost of putting the sun seed system into operation is modest compared to its potential contribution to agriculture and agribusiness. Concern has been expressed about the commercial attitude and technical skills of plant personnel.

In the chart below, the demand section is based on the required feed consumption for sunflower meal in a balanced feed ration for livestock and poultry based on survey data in 1989 and 1999. The year 2005 demand is based on required livestock numbers due to the estimated population growth.

Sunflower	1989	1999	2005
Demand (MT)	395,500*	283,151*	436,000*
Production (MT)	15,000	1,050	60,000
Deficit (MT)	- 380,500	-282,101	-376,000
Yield Assumptions (MT/Ha.)	1.5	1.5	3.6
Hectares Needed to Utilize Processing Capacity	40,000	40,000	16,700
Hectares Required - to meet total feed protein demand	263,666	188,767	121,111
Hectares Planted	12,500	700	

* Animal feed protein total demand.

Sunflower production has been completely terminated. Sunflower is an excellent crop, not only for the cooking oil but also for the by-product, sunflower cake (meal), which is an excellent feed ingredient for cattle and dairy cow rations with 41% digestible protein. The above chart utilizes the feed intake demand for a vegetable based ingredient that is required for feed efficiency in fattening beef, sheep, poultry, and in dairy cows. The capacities are based on the percent of sunflower meal remaining after the mechanical extraction. With good agronomic practices Kosovo sun seed production yields could be doubled from the present level and provide a good return per hectare due to the demand for cooking oil and the meal (the residual after oil is

extracted from the sunflower seed) for feed. For every metric ton of whole sunflower seed 220 kg. of high value oil can be obtained plus 660 kg of high value feed.

An evaluation is needed of the potential competitiveness of Kosovo produced sun oil products, the real cost of putting the plant into operation and reestablishing private sun seed production and the amount of training and reeducation needed for the plant to operate effectively and efficiently. As with other socially owned entities the ownership issue must also be quickly accommodated, but not necessarily resolved. The sun seed plant may also represent an opportunity for foreign investment, and therefore technology and management assistance.

Key Opportunities for Sun Seeds Subsector Development:

- Sunflower provides two major products, cooking oil and high protein feed for livestock and poultry. (Solvent extracted meal will provide a 41% digestible protein for livestock.)
- Sunflower is more drought resistant than maize.
- Sunflower oil enjoys a high demand on the world vegetable oil market.
- Yields can double with proper varieties and inputs.
- Does well on marginal land.

Major Constraints to Sun Seeds Subsector Development:

- Hard on the soil – removes high amount of nutrients.
- Requires very good soil management.
- Input costs high – fertilizer and insect control.
- Causes significant wear on combines.

Sugar Beets

In the early '70s there were more than 53,000 MT of sugar beets produced in Kosovo and in the mid-'60s around 97,000 MT. There is sugar beet processing plant in Peja that is reported to be in reasonable condition and can be made operational. The authors were not able to visit the plant or collect current information on sugar beet production.

It is possible that a similar situation to that of sun seeds could exist with the sugar beet complex, i.e., a considerable amount of sugar imports could be offset with domestic production and processing of beet sugar. This needs investigation however.

Mushroom Gathering and Cultivation

Mushroom production and gathering was mentioned by several informants as having high potential for Kosovo. At one time there was a commercial mushroom production facility near Klina, but nobody was there when the authors visited, and the operation was in an advanced state of deterioration. Reportedly wild mushrooms can be gathered in the hills.

Mushrooms have a high unit value, will yield high revenue per hectare, can be exported and may represent a way to make economic use of currently unused low hills as well as provide a seasonal source of employment to gatherers. A more detailed investigation of the potential for mushroom production, gathering and processing is needed.

Alfalfa

Alfalfa is an important carbohydrate/energy source for ruminants and is a significant fodder crop in Kosovo. Only antidotal current information is available on alfalfa production; the current crop looks quite modest in both quantity and quality. Alfalfa production needs to play a significant role in Kosovo agriculture since it improves soil nitrogen as a part of a rotation program and is an important animal feed component, especially for dairy cows. Mention has been made of alfalfa pellet processing for both the domestic market and for export. It is questionable however, that with a significant Kosovo cattle herd consuming a quality diet and available land there would be sufficient excess alfalfa for exports.

Honey Production and Processing

Honey production was also mentioned as a source of marketable production not requiring significant land, and a comparatively labor intensive business. Bees are very useful for pollinating orchards. The authors visited a honey processing facility in Ferizaj, but were not able to talk to anybody about the business that is currently not operating. A “partly functioning” honey processing coop is reported to be in Decan, but no other information is available. However, honey seems to represent a good SME opportunity.

Herbs and Medicinal Plants, Extracts and Essences

These items and products were mentioned by informants as also having potential for high value production. Reportedly some special herbs and medicinal plants found in Kosovo can be gathered and processed into valuable extracts and essences. No further information was available in these items, but the authors are aware of successful small-scale extract and essence businesses in other developing countries, especially where organic and/or natural claims can be made. The potential for these products can be investigated at a later time after plans for other higher priority products have been developed.

Aquaculture

The Lipjan layer coop has a fish farm in a nearby village. The authors had lunch at a restaurant very near the Albanian border just outside Prizren that is built over the spillway of a very well stocked trout farm. Reportedly the trout farm is quite successful. Kosovo has a number of mountain streams that may lend themselves to fish farming. Feed availability and access to premium fresh markets or freezing facilities would be necessary, but aquaculture is a high value, labor intensive operation best implemented where there is access to large quantities of clean cold water. There may be several locations in Kosovo where these conditions exist. As with extracts and essence, the potential for fish farming can be investigated at a later time after plans for other higher priority products have been developed.

Agrotourism

While it is clearly a longer-term consideration, Kosovo has many beautiful landscapes and interesting villages, especially those in or near the mountains, which could someday lend themselves to agrotourism. It is possible that Europeans would enjoy the opportunity to stay on a farm and participate in daily farm life while enjoying trips to nearby mountains. This possibility is for the future, but does represent a potential source of rural revenue.

International Market, Technology and Know-How Access

Over the past 10 to 20 years Kosovo producers and agribusinesses have been rather isolated from their region and the world. Their market has been that of subsistence and village level trade with little exposure to regional and international environments. This isolation has resulted in low production levels, due to largely outdated farming techniques, and outdated agribusiness processing technology and methods of operation. However, sector participants appear eager to learn and improve their inputs and methodologies. Bringing the sector up to the 21st century will require that:

- 1) An agricultural and agribusiness information and assistance center be made available;
- 2) Seed, fertilizer, chemical and other input suppliers provide workshops on their products;
- 3) Demonstration plots be developed, probably on kombinat land;
- 4) Local dealer organizations be established that provide inputs to producers; and
- 5) Strong and effective communications are developed and promoted between input suppliers, dealers, producers, processors and markets.

Market needs, and the requirement to be highly competitive, must drive the entire system.

E) Subsector Priorities

It is difficult to do an analysis of subsector priorities with the modest amount of information currently available. However, it would seem that the following criteria should be used in any such prioritization.

In several of the following sections of this report prioritization classifications are used. "A." Priority represents those factors which are deemed to be of the greatest importance, "B." Priority factors of somewhat lesser importance and "C." Priority factors of lesser importance than "B." Priority. The ranking of a factor within any of the above three categories is not of great importance.

"A." Priority Subsector Selection Criteria:

- Realistic potential production value per hectare.
- Size of local market available.
- Amount of labor required in production and processing.
- Competitive advantage that can be achieved.
- Export potential.

"B." Priority Subsector Selection Criteria:

- Experience base available.
- Effectiveness of land utilization.
- Irrigation requirement.
- Inputs cost.

Without conducting a formal analysis, and heavily based on local informants recommendations and interests, the following preliminary subsector priorities are suggested for USAID support programs. "A." Priority subsectors should be given preference to "B." Priority subsectors which should be given preference to "C." Priority subsectors.

"A." Priority Subsectors:

- The production of eggs from layers.
- The production and processing of dairy products, especially fresh milk and yogurt.
- Grape production and wine making.
- Vegetable production and processing.
- Meat production, likely from dairy steers, and slaughtering and the production of processed meat products, e.g., sausages.
- Flour milling and baking, but not necessarily from locally grown wheat.
- Corn production and the milling of quality animal feed.

"B." Priority Subsectors:

- Fruit production and the processing of fruit products, including juice drinks.
- The gathering and processing of wild fruits such as blueberries.
- Sun seed production and the processing of sun oil and products.
- The processing of high value added food products such as confectionery, bakery and snack products.
- Alfalfa production for animal feed and possibly pelletization.
- The raising of broilers and the processing of chicken meat.
- The gathering, production and processing of mushrooms.
- Raising sheep and goats to make effective use of marginal land and for the production of milk and cheese.
- Barley production for the brewery.
- Wheat production.

"C." Priority Subsectors:

- The packaging of bulk commodities such as coffee (including roasting), sugar, rice, etc.
- Pork production and processing
- Sugar beet production and processing
- Oats production
- The gathering and processing of herbs and medicinal plants
- Rendering of animal byproducts for animal feed

V. Preliminary Program Recommendations

A) Prioritized Challenges

The following challenges are roughly prioritized based on their potential impact on the longer-term development of a large, dynamic and competitive agricultural/agribusiness sector. "A." Priority challenges should be given preference to "B." Priority challenges that should be given preference to "C." Priority challenges.

"A." Priority Challenges:

- There is heavy population pressure (and population growth is still high) versus available agricultural land; current land use appears to be too focused on lower value, subsistence related crops, and all available land does not appear to be completely and most effectively utilized.
- Production agriculture is dominantly composed of small scale, non-specialized and subsistence focused units.
- Yield and conversion ratios are below international standards due to the minimal use of commercial inputs and the recent (last 8 years) lack of technical assistance from extension, applied R&D or supplier/buyer sources.
- Non-land assets of suppliers, producers, processors and marketers have been seriously damaged, killed or looted as a result of recent events, and poorly maintained over the last 8 years; most participants have few assets or sources of cash flow to replace or upgrade their assets, or to purchase inputs.
- There are very few sources of non-micro level finance for producers or agribusinesses; those that do exist are very expensive (24%+/year) or come from questionable sources; apparently nearly all planned donor finance programs will be focused on small-scale producers.
- There are currently very few current sources, especially domestic, of quality inputs either for production agriculture (e.g., feed, planting seed, agricultural chemicals, breeding stock, chicks, and fertilizer) or post harvest agribusinesses (e.g., raw milk, fat calves, broilers, wheat/flour, sun seed, sugar beets, grapes, fresh fruits and vegetables, etc.).
- Most of the large, often integrated social sector facilities are damaged or looted, have been very poorly maintained and have not operated at a significant level of capacity utilization for 8+ years.
- Nearly all large-scale social enterprise managers and employees have no recent experience, and prior experience was in a semi-commercial/semi-socialist environment.
- The base of breeding stock and seed varieties is badly deteriorated.

"B." Priority Challenges:

- Most land holdings are broken up into small, apparently inefficient, plots.
- There are still some mines and other ordinance in producers' fields.
- Most outlets for higher value producer products such as grapes and vegetables are not operating and have significant ownership and capital access challenges.

- Kombinats and coops that are minimally or not operating own most commercial scale land, vineyards and orchards.
- Reportedly the kombinats suffered huge losses when they were operating in the 80s.
- Veterinary services are very minimal, and vet assets have been destroyed or stolen.
- Irrigation systems, needed for many high value products, are in disrepair.
- Ownership of coops and kombinats is uncertain and could delay their utilization.
- There are almost no sources of technical or managerial assistance for agribusiness.
- There is currently weak consumer buying power, and this is not anticipated to improve significantly until at least the fall of '00.
- The lack of rural development puts considerable pressure on municipal systems and resources due to migration, especially for a young population.
- The more family members that are working overseas the less interest producers have in expanding agricultural production or establishing agribusinesses due to the perceived risk related to past government negative programs, and to a lesser extent, the perceived lack of opportunities.

"C." Priority Challenges:

- Orchards and to a lesser extent vineyards, especially those in the private sector, are badly deteriorated due to no maintenance, and will take quite some time and cost to reestablish.
- Land title challenges will make it difficult to use land as collateral, and will likely be the basis for disputes.
- There is some scarce agricultural land miss use for buildings.
- There has been no significant government or other public sector support, e.g., university or extension services, for at least 8 years, and there is no current official Kosovar government.
- There is little or no market information available for producers, processors or consumers.

B) Prioritized Opportunities

The following opportunities are roughly prioritized based on their potential impact on the longer-term development of a large, dynamic and competitive agricultural/agribusiness sector. "A". Priority opportunities should be given preference to "B". Priority opportunities which should be given preference to "C." Priority opportunities.

"A." Priority Opportunities:

- The wine industry can be rebuilt with a modest cost versus the potential economic benefit for private sector producers, employment in the badly damaged southeast central region, and exports.
- The vegetable processing facilities at Ferizaj can be put back into operation at a modest cost versus the potential economic benefit, and vegetable production can be quickly reestablished, assuming the irrigation system around Ferizaj is quickly repaired.
- The private sector is very interested in reestablishing yogurt and fresh milk, layer and flour milling operations, and for the most part lacks only finance.

- There appear to be significant opportunities to improve yields, output and conversion ratios, and therefore competitiveness, by introducing updated varieties, processing technology and cultural practices.
- Repairing the irrigation systems does not appear to be hugely expensive. The Bank estimates \$25 million for the whole system. The best return in system rehabilitation costs would be around Ferizaj for the vegetables subsector and around Gjakova for the fruits subsector.
- There should be an approach for utilizing the kombinats and coops extensive commercial scale, often-integrated operations if UNMIK is willing to make the decision that they have the right to do so. This would involve quickly valuing the entities, leasing them to consortiums on a business plan competition basis for a period of 2 – 3 years, providing the consortium modest financing, then auctioning them off when ownership is determined using auction proceeds to pay off the original owners, when they are finally determined.
- Many private sector entrepreneurs are very experienced in doing business under difficult circumstances, as will exist over the next two years, and have the drive and managerial skills to succeed.

"B" Priority Opportunities:

- It is possible that the sun seed processing, and to a lesser extent sugar beet processing, businesses can be restarted within the next year; this would offset imports, create employment and provide cash income to producers.
- While the social sector orchards around Djakovica will take some time to rebuild or replace they at one time represented a significant source of high value, labor intensive production and processing, and the facilities at the fruit processing plant are said to be not seriously damaged versus their output potential. Around 5,700 ha. of private sector orchards are said to be recoverable.
- Kombinat or coop assets exist that could be used to provide a back up supply of high quality inputs to producers by developing a Kosovo wide dealer/distributor network.
- Agribusiness study tours to countries with similar scale facilities, and basic technical and management training, would have a high yield due to the lack of such information over the last 10+ years.
- Sheep and goats can be reestablished to make better use of marginal land and can provide raw material for high value cheese processing.
- The brewery at Peya is operating and will have a significant requirement for barley, and possibly hops.
- While it would be expensive to develop, many entrepreneurs want to assure a minimal supply of raw material by owning production assets that will provide a modest share (20 – 30%) of their input needs.
- There may be an opportunity to redesign and retrain the old coop and coop league structure to function as an intermediary between larger scale suppliers and output buyers and small-scale producers.
- There is a need for many small-scale agriculture and agribusiness service industries; these can be developed comparatively inexpensively and managed rather easily.
- Small-scale greenhouses and broiler or layer operations may be a good way to increase rural family incomes.

- Some of the larger Kosovar entrepreneurs are interested in working in a triangular relationship with donors and kombinats to redevelop and effectively manage selected kombinat operations, especially in milk and juice processing and meat processing.
- There are numerous opportunities to support the redevelopment of high value added business serving the Kosovo market that would reduce imports, significantly increase employment but would not necessarily utilize Kosovo sourced raw materials in the short to intermediate term. Examples include confectionery companies, flour, corn and potato based snack products producers, biscuit/cookie bakers, companies that roast and package coffee and package sugar, tea and rice, and fruit juice processors/packagers.

"C" Priority Opportunities:

- There may be an opportunity and need for a rendering plant to process diseased, dead, dying and down animals over the coming year, and as herds are rebuilt on an ongoing basis; the byproducts of the plant can be used in animal feed.
- There are several organizations that may have the potential to support an aggressive agribusiness development program including the Kosovo Businessmen's Association (KBA), RIINVEST and the Kosovo Association for Civic Initiatives (KACI).
- In the intermediate term Diaspora funds may be available to invest in equity partnerships with domestic Kosovars.

C) Development Program Objectives

Agribusiness Program Objectives:

The goal of the agribusiness development program outlined here in is to significantly increase per capita income in Kosovo by stimulating the development of a competitive, dynamic and substantial agricultural and agribusiness sector.

The specific objectives of the program are:

- Improve the total output and productivity of agriculture and agribusiness through the more effective utilization of appropriate current technology and know how.
- Increase employment in agribusiness.
- Reduce imports of food and other agriculture related products that can be produced in Kosovo.
- Increase the number of producers that are marketing a significant portion of their production.
- Increase agriculture related exports.
- Determine the potential for and means of using existing socially owned assets to contribute to sustainable agribusiness growth.
- Increase domestic and international investment in commercial agriculture and agribusiness.
- Improve the agricultural and agribusiness enabling environment by:
 - supporting the development and sustenance of market-led private sector associations and support institutions and

- providing market oriented, economic growth focused agriculture and agribusiness advice to the current administration in the short term, and to new administrations in the intermediate term.

Overall Program Objectives:

It is very presumptuous of the authors to assume USAID/Kosovo development priorities, but the following are deduced from conversations and the authors perceptions of current programs and needs.

Immediate

- Continue to support DART and OTI efforts.
- Monitor other donors' programs for emergency relief to determine if there are any missing components.
- Develop intermediate and longer-term programs that will rebuild the Kosovo agribusiness sector in a competitive, dynamic and substantial force in Kosovar economic growth.
- Implement short-term programs that are needed to develop or support longer-term programs and fill gaps left by other donors.
- Offer micro credit to clients targeted geographically and by type business, not including traders. (FINCA)
- Continue selective support of UN, WB, FAO and NGO humanitarian programs.

Near term

- Implement longer-term programs.
- Adjust programs based on results, evolving needs, other donors programs and political and economic events.
- Develop an exit strategy.
- Conduct M&E on programs.
- Continue selective support of the most effective and efficient UN, WB, FAO and NGO humanitarian programs.

Longer term

- Implement the exit strategy.
- Assess programs for lessons learned.

D) Prioritized Basic USAID Program Recommendations

i) Activities

1) Immediately design and implement a networked Agribusiness Development Center (ADC) that offers one-stop-shop assistance to agribusiness entrepreneurs. The ADC will offer finance, technical and managerial assistance, and be networked to Kosovar and international sources of assistance. Financial assistance would only be provided until the local banking system becomes

operational, after which the loan portfolio would be sold to a bank or banks, and those banks would be supported, possibly via guarantees, to directly provide loans to ADC customers. Successful Kosovar agribusiness people and players will provide the ADC with extensive guidance, and be a means of networking large entrepreneurs with smaller businessmen and or kombinats. The objective of the ADC will be to support the development, growth and sustenance of highly competitive agribusinesses and services providers that supply inputs, services and technical assistance to producers, or process and market producers' output.

OTI's local offices could become part of the ADC's network. The ADC would have international specialists for most of the target subsectors, each with local counterparts. There will be no size limits on the firms that the ADC supports. The emphasis will be on commercial viability, employment generation, value-added products, rebuilding businesses and offsetting imports or generating exports. Assistance will only be provided to those firms that do not have other sources of support. The ADC would have a unit that provides institutional development services to coops and agribusiness and commercial agriculture related associations.

Subsector specific study tours, and operations and technical training would be offered to agribusiness managers. The ADC would operate a communications center that offers easy access to the Internet, an e-mail service, an Internet research service and effective international and domestic telephone services. The domestic telephone system could be via branch offices, possibly OTI's offices. The ADC could eventually develop and manage an Enterprise Fund for providing equity, partially sourced from the Diaspora, to qualified clients.

2) Quickly convince UNMIK that they have the right to administer the privatization of viable kombinat and coop assets. Propose and advocate the use of a "value, lease, loan and eventually auction off the assets" approach. The basics of that approach would be:

- Immediately do a valuation of each social sector entity with reasonable potential for rehabilitation; this will determine what will be owed to the current owners, whenever and whomever they are determined to be over the next 2 – 3 years;
- Have the current employees/claimed owners group form a consortium that the ADC works with to develop a business proposal; competing proposals, if any (there are some problems with both Serbs and Kosovars claiming "ownership"), will be judged based on commercial and sector redevelopment strategy consistency merits; special consideration would be given to proposals that reflect the ethnic composition the area around the entity;
- The winning consortium will lease the facility (from UNMIK) for 2 – 3 years for a nominal fee, and be offered a traunched loan on a mutual and joint covenant basis by the ADC; loan proceeds will be dispersed based on milestone accomplishment, as outlined in the business plan;
- Significant managerial, accounting and technical assistance would be supplied for unsecured (most) loans by the ADC; short interval monitoring by the ADC, using a standard accounting system would be a condition for loan participation;
- The consortium would have to service the loans from operating income and accumulate retained earnings to be able to bid on the assets at the end of the lease period;
- The assets would be auctioned off (now as an operating entity) at the end of the lease; hopefully the consortium has been able to accumulate significant retained earnings, there

is a banking system available for additional secured debt and additional local or foreign investors have been identified, with the assistance of the ADC;

- The proceeds of the auction would be used by UNMIK to pay off whomever is determined were the 1 Nov. '99, or valuation date, owners, and any remaining debt; any excess would go the treasury of the new Kosovar government.

Unfortunately UNMIK's advisors are talking about declaring the social sector companies bankrupt (with \$8 mil. in bulk wine in storage) and auctioning them off immediately. This would be a windfall for the Albanian Mafia, and other undesirable elements, and would not optimize the value to the people of Kosovo. We plan discussions with the Barents team.

If UNMIK needs assistance to do the valuations that should be provided by USAID to assure that operating considerations are included in the valuation process.

3) Design and implement an immediate evaluation of a USAID supported Agricultural Re-supply Center (ARC) that would:

- Import high quality agricultural inputs to re-supply producers, probably including:
 - appropriate and certified planting seed,
 - necessary agricultural chemicals and related equipment,
 - animal health care products,
 - fertilizer,
 - animal feed ingredients,
 - broiler and layer chicks or eggs,
 - vegetable seedlings,
 - young fruit trees,
 - bred heifers and a cattle imports quarantine facility,
 - a reserve supply of wheat and corn, and
 - possibly grape cultivars;
- Negotiate with UNMIK to import its inputs duty free, thus encouraging the redevelopment of agriculture and agribusiness;
- Lease existing kombinat facilities to store, hatch, grow or process the inputs;
- Sell only to donors and NGOs, farmer coops or local private sector dealers; the local dealer network and coops would be developed by the ADC;
- All sales would be at cost and prices widely publicized;
- Stop importing or supplying and input as soon as there are local supplies of those products;
- Be operated under contract by an organization with considerable experience in commercial agribusiness supply operations such as Land O' Lakes, ACDI/VOCA or Cargill.
- Relieve NGOs and donors of the difficulties of selecting and importing agricultural inputs for humanitarian distribution, if they so choose. It would offer local input marketers ready access to high quality inputs to distribute to producers.
- Be able to recover, if it is operated properly, all of its product and operating costs from sales, and only charge USAID for project management.

Research would be conducted into using PL 480 commodities to directly supply or be monetized to support the ARC.

ARC would support, not compete with Kosovo input providers. The first step in developing an inputs supply business is establishing a customer base. This can not be accomplished without product. ARC would supply Kosovar input suppliers/dealers with quality, competitive priced inputs that they could use to develop their business. As soon as they reach the point where they are large enough to do their own importing, they can do so. The ADC would support and train input suppliers regarding how to develop and sustain their business, including how to supply quality technical assistance to producers. ARC will be careful to limit its product line to those items that are not being adequately supplied to the market.

Support quick, short studies to assess a) the situation with wheat and flour milling capacity and the viability of the two large bakeries, the feasibility and impact of supporting the reestablishment of b) the sun seed and c) the beet sugar systems and d) how to most effectively redevelop the vegetable processing chain around Gjakova and e) the fruit products processing system around Freizaj, including the reestablishment of the area's full irrigation system. The need for and viability of a small rendering plant could also be evaluated.

Offer to provide Pillar Four with an advisor specialized in commercial agribusiness development. The current Pillar Four Agriculture Advisor is a French farmer, agricultural engineer, military reservist that has a very social, farmer based approach to agriculture development. This may result in the market-led, private sector driven aspects of UNMIK's support being de-emphasized and slow agriculture and agribusiness's contribution to Kosovo's economic growth.

Support the development of simple models that show the results of current land holding size and enterprise production patterns on producer family food supply and income, the national food supply balance and per capita income. Manipulate land use and production enterprise choice to optimize producer income and the use of Kosovar agricultural related resources. Simulate the impact of production and productivity improvements. This model will help UMMIK, FAO, EU and local planners understand the need for an agricultural/agribusiness transformation.

Fund a study with recommendations for optimizing the sustainable use of forestry resources.

ii) Target Clients

The following matrix illustrates preliminary recommendations regarding priority of type client and subsector for the overall agribusiness program. Subsector priorities would be enhanced by the results of the above-recommended assessments. It can be noted that priority should be placed first on clients that are private sector rebuilders, second on reorganized kombinat rebuilders, assuming UNMIK is able to implement the recommendations included in this document, then commercial cooperatives focused on inputs supply, then private sector start-ups. If kombinats are not reorganized, and coops do not exhibit the serious potential to become commercial, the dominant clients would, at least for financial assistance, be the private sector.

The subsector priorities shown in the chart are similar to those previously outlined, taking into account the potential for rehabilitating already existing facilities at the kombinats and the existing structure and experience of the coops. An "A" indicates a high priority type client/subsector, "B" a medium priority type client/subsector and "C" a low priority type client/subsector. "NA" means there is no participation by or future justification for that type client in that subsector.

A rough estimate is provided regarding the number of potential qualified clients by type. In the short time available for field work it is difficult to understand the number of target private sector firms that have been destroyed and the owner is interested and willing to rebuild under the conditions to be offered by the recommended program. It is also difficult to forecast the number of kombinats that are willing and able to develop a business on a commercial basis, assuming UNMIK pursues the lease concept outlined above. The same is true of coops that can and are willing to restructure and redevelop themselves to become sustainable entities. The ADC would provide support to kombinats and coops willing, able and interested in becoming sustainable businesses, primarily as intermediaries with producers. How many of them can become qualified is difficult to predict.

Client Type Subsector	Private Sector Rebuilders	Reorganized Kombinats Rebuilding	Commercial Coops Rebuilding or Services	Private Sector Start-ups
Dairy Processor	A	B-	C	B
Wine Producer	NA	A	NA	C
Vegetable Processor	NA	A	NA	C
Commercial Scale Layer Operations	A	C	B	B
Flour Mill	A	B-	NA	B
Bakery	A	C	NA	B
Feed Mill	A	B-	B	B+
Inputs Supply Agent	A	C	B+	B+
Meat Processor	A	C	C	B
Fruit Processor	A	B+	NA	B
Commercial Scale Broiler Operations	B	C	C	B+
Industrial Crops Processing	NA	B+	NA	NA
Value Added Food Processing	C+	C	C	C
Estimated Number of Qualified Potential Clients	30 – 40	10	5	40 – 50

iii) Implementation Approach and Time Frame

Programs that can be implemented as follows using the above numbers:

- The ADC: Via a four-year design and implement project quickly contracted through RAISE.
- “Selling” the Kombinat Lease Concept to UNMIK: ASAP by Mission and WDC management.
- ARC: Via a two-year separate design and implement project quickly contracted through RAISE.
- Subsector Feasibility Studies: Via a short-term separate project(s) immediately contracted through RAISE to be completed before 1 January 2000.
- Pillar Agribusiness Advisor: Via a one to two year contract immediately implemented as soon as Joly Dixon agrees, through SEGIR IV or RAISE.
- Sector Macro Model Development: Via a short-term contract through SEGIR IV, RAISE or CIGAR.
- Forestry Subsector Assessment: Via a short-term contract through RAISE to be implemented after the above activities are underway.

iv) Rough Budget

Budget requirement forecasts are not possible without a better idea of the number of components USAID wants to include in each activity and the chosen time frame. However, the following very rough cost ranges are offered for each recommendation, using the recommendation numbers.

- The ADC: \$3 – 5 million/year for management, technical assistance facilities and programs, plus the cost of finance. The total amount of finance required would depend on the emergence of a local banking sector. If 12 clients are assisted in the first year and 20 in the second and the average size loan is \$150,000, year one finance requirements would be \$1.8 million and year two \$3 million. If the financing were well managed, these funds would be recoverable. Hopefully by year three a local banking system would be available.
- “Selling” the Kombinat Lease Concept to UNMIK: No external cost unless Joly Dixon requests TA as related to the concept, or for kombinat asset valuation.
- ARC: \$1 – 2 million/year for management and working capital interest, assuming facilities rental and delivered product cost is recovered from sales.
- Subsector Feasibility Studies: An average of \$100,000 for each study for a total of \$700,000 if all seven studies are implemented.
- Pillar Agribusiness Advisor: Around \$300,000/year, so \$300,000 for one year and \$600,000 for two years.
- Sector Macro Model Development: Less than \$100,000.
- Forestry Subsector Assessment: Less than \$150,000.

v) Linkages of Program Components with Each Other and Objectives

The above-recommended programs are linked and complimentary to each other and support program objectives in the following ways:

- ARC supplies inputs to ADC clients (as well as others) and thus supports the ADC's success and stimulates the adoption of improved inputs.
- The feasibility studies will help the ADC develop its subsector priorities and better understand subsector opportunities, constraints and needs. The Pillar Four advisor would also find these useful.
- The ADC will encourage the use of ARC inputs via its TA and training activities and thus improve sector productivity.
- The kombinat utilization recommendation will provide both ARC and the ADC with important clients, and enable the much more rapid and less costly development of output buyers from small holders, and processors of food products for the urban and export markets.
- Support for Pillar Four will help create a "policy" environment in which ARC, the ADC and the kombinat lessees can flourish.
- Development of the sector macro models would provide conceptual guidance to the ADC and the Pillar Four advisor and thus help move toward a more sustainable sector and one that makes a significant contribution to economic growth and increased per capita incomes.

vi) Comparative Client Targeting and Donor Coordination

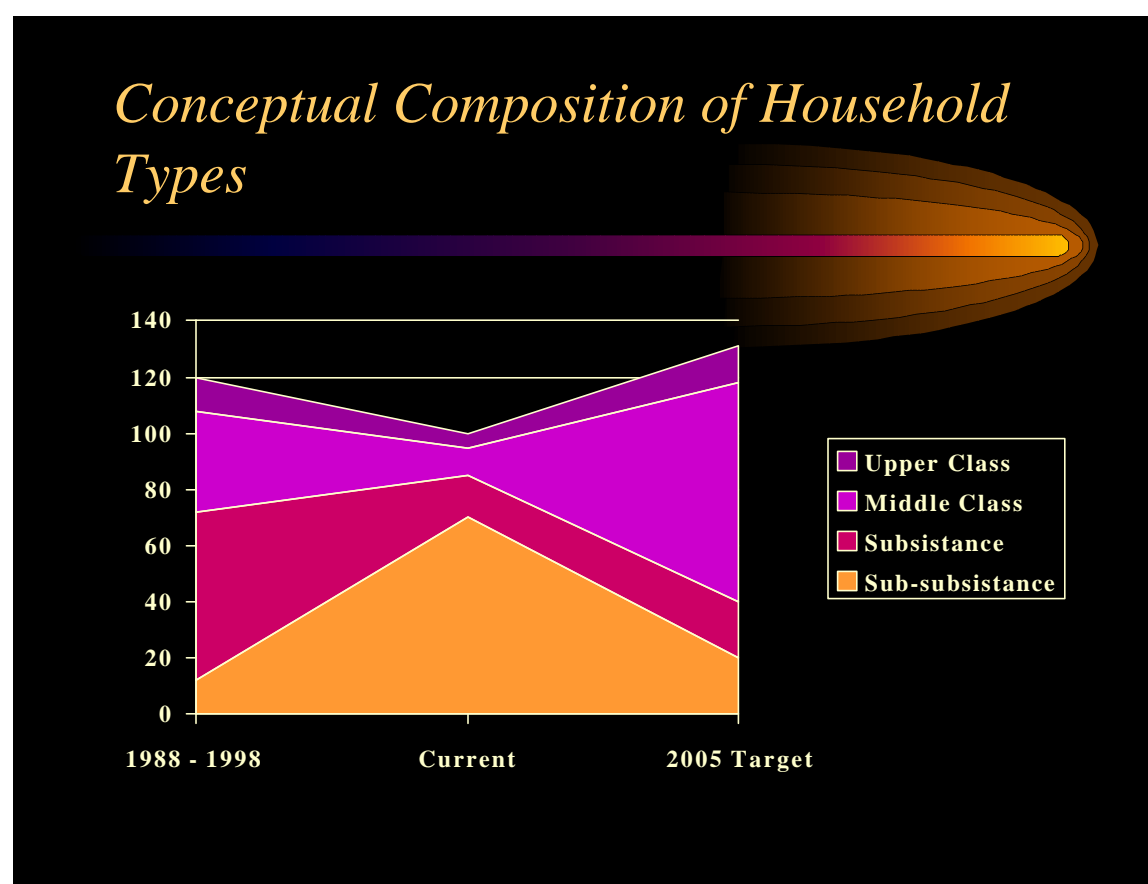
Comparative Targeting

While the middle class in Kosovo is currently quite small, their development will drive economic growth. Nearly all other donors, and all NGO programs, are focused on humanitarian relief. The above recommended program is designed to support the recreation and growth of a middle class, and to move as many people as possible from surviving by producing basically just for their own needs to active participants in a dynamic commercial agriculture and agribusiness sector. To accomplish this the focus must be on the creation of sustainable output marketing and inputs supply businesses that will enable producers to grow/raise more at a lower cost and higher quality and thus increase their income and lifestyle. Gainful employment in the agribusiness sector is necessary to enable a significant portion of the rural population to earn a reasonable income. Population pressure on land is too heavy for production agriculture to provide good employment for a large portion of the population. However, input supply businesses and output processing and marketing businesses supplying and supporting competitive producers can provide significant jobs, and food for the urban population. The following table illustrates the authors' understanding of comparative client focus.

Donor/NGO	NGOs	Other Donors (esp, WB, FAO, EU)	USAID Agribusiness Program
Primary Client Focus	Sub-subsistence	Sub-subsistence (short term), Subsistence, Infrastructure and Public Sector Institutional Development	Middle Class Growth (moving families from subsistence to middle class) and Private Sector Institutional Development

Slide 5 shown below is a conceptual illustration of the historical, current and future evolution of the proportion of target client groups. This slide illustrates the increasing importance of the middle class.

Slide 5



Donor Coordination

It will be necessary to track the progress of the WB/FAO program, the EC revolving rural micro savings and loan program and the Merci Corps Sustainable Development Centers concept as they develop. It is doubtful if any of these programs will represent duplication or overlap of the above-recommended USAID programs but they should be monitored for that possibility. Also,

USAID should inform these groups about their plans. It is more likely that there will be opportunities for cooperation with these programs, for example by referring firms who are not targets for USAID support to activities supported by other donors.

As noted above it will also be necessary to monitor other donors' humanitarian relief and most-in-need restocking programs for gaps in the coverage of their programs.

VI. Assessment of Preliminary Program Recommendations

A) The Role of High-Value Products

High value added products will play a very important role in the recommended programs. Continuing the current scenario of the producing basic agricultural products with minimal processing will result in low farm incomes, few new employment opportunities and a continued high import bill. One of the basic aims of the recommended programs is to shift agriculture and agribusiness to a focus on highly competitive, high value/value added production and products.

1. The highest potential specific products

High priority value added products that should be focused on are:

- Processed dairy products, especially fresh milk, yogurt and cheeses,
- Wine,
- Processed vegetables,
- Processed meat products, and
- Processed fruit products, including juices, juice drinks and preserves.

Value added products that should be investigated are:

- Processing of wild fruits such as blueberries,
- Processing of sun oil into hydrogenated products and margarine,
- Processing of high value added confectionery, bakery and snack products,
- Alfalfa pelletization,
- Production of goat milk and cheese, and
- Processing of wild and cultivated mushrooms.

2. The highest potential specific markets

For the near future, domestic markets represent the highest potential for all products except wine, wild fruit products, goat cheese and mushroom products. Where possible, regional markets should take precedence over non-regional markets due to firm management's better familiarity with their requirements. Considerable time, money and expertise are required to understand and develop international markets. The exception is where an international customer has already been identified or is familiar with the company and its products from past experience, e.g., the wine company in Germany that formerly imported bulk Kosovo wine.

B) The Role of Credit

Access to credit has played a major role in successful agriculture and agribusiness development through out the world. The number one constraint to agribusiness entrepreneurs wanting to restart or start businesses in Kosovo is the lack of credit. Credit will be the catalyst for agricultural and agribusiness development in Kosovo. Credit must be made available immediately for the sector to rebound from past disasters. Until there is a viable banking system, especially one interested in rural credit, debt will have to be supported by donors.

Experienced professionals at the ADC would manage lending. Credit policy will be consistent, unbiased and offered under strictly commercial terms and conditions. Credit terms would be based upon the individuals needs and type of production, processing or services business. Recipients will be charged a rate similar to that which a local bank would charge so the portfolio can be eventually sold to commercial lenders.

ADC loans would only be available to clients who use ADC management and technical services, a standard ADC accounting system and agree to monthly progress versus agreed milestones monitoring. Whenever possible, loan proceeds will be utilized to directly purchase what they are financing rather than be dispersed in cash. ARC will help here.

1. Target beneficiaries

The loans would be available to all agribusinesses including feed mills/feed dealers, seed dealers, implement dealers, dairy processors, poultry processors/slaughter houses, fruit and vegetable processors, flour millers, transport companies, grain elevators/storage facilities and intermediaries (dealers). Coops and kombinats could also apply for loans to rehabilitate and reestablish their operations. Producers would be indirect beneficiaries of this credit in that output buyers would be able to advance inputs to producers using their ADC credit line and/or input suppliers could advance inputs against future payment. The coops and kombinats could do the same. Producer credit has a very high transaction cost and most producers have very little collateral, especially considering land tenure problems. Supplying credit to agribusinesses will significantly enhance system sustainability.

2. Optimal intermediaries and mechanisms

The ADC would be the intermediary. ARC could help enforce repayment from input suppliers using their services. If an ADC borrower were not current on their payments, ARC would stop supplying them.

3. Credit use targets

The main uses would be for rehabilitation of agribusiness facilities, replacement or refurbishing of equipment, purchases of inputs, working capital and finance for customers. Businesses with a successful track record and/or existing facilities would be primary targets.

C) The Role of Policy Reform

Kosovo has been the recipient of socialistic/suppressive government controls for over 30 years and is now administered by a caretaker government (UNMIK) under a temporary directive from the UN. To become reasonably self-supporting, Kosovo must make a deep economic and social transformation to a market driven economy with reasonably open borders. Agriculture and agribusiness can play a major role in Kosovo's rebirth. To do this there must be an expedient and equitable solution to ownership and property rights, especially as related to land tenure and the kombinats and coops, and immediate development of a solid private banking system. International standard commercial laws must be established before cross-border agribusiness investments and partnerships can be formed.

It is questionable which policies are in effect at this time, and who has the authority to make policy. Technically, Kosovo is a province of Yugoslavia. Ethnic Albanians however, would pay little attention to that government's policies. UNMIK has decided it has the right to make some policies, for example impose import duties, but how far it would be willing to go into agricultural and agribusiness related policy is uncertain. Local politicians believe that very few policies should be implemented until elections are held. However, according to a recent poll, the most active party, with functioning representatives in most "government" facilities, would not get a majority of the votes.

Given the current environment, i.e., the short term, there is little need for a significant policy component to USAID agribusiness support. As previously mentioned however, UNMIK is looking at agriculture and agribusiness development and therefore needs related "policy" advice. The suggestion to supply a commercially oriented person to Pillar Four is therefore included in program recommendations.

If the kombinat utilization program outlined above can be accomplished, the recommended program can be implemented without other reforms. The lack of a significant policy environment will make foreign equity investment unlikely. However, the domestic market will continue to exist and while it will be difficult, business will be done. This program is designed to help the agribusiness sector contribute to economic growth during what is likely to be a prolonged transition to a new governmental structure.

1. Specific policies that need reform

The major agriculture/agribusiness specific "policies" that need attention relate to kombinat and coop assets and ownership, land tenure and banking. UNMIK and USAID are already looking at the banking issue. Another important policy related issue that affects agriculture and agribusiness is infrastructure, especially roads, the telephone system and electrical power. Also, it would be useful if import duties were limited to finished or intermediary goods. There is little benefit to taxing basic commodities being imported by donors or NGOs. Significant taxation of agricultural/agribusiness raw materials discourages local production and processing, which for the time being requires imported inputs, and thus reduces the ability of agribusiness to create employment.

The new person advising UNMIK should focus on the kombinat/coop ownership issue, land tenure and import regulations effecting agriculture and agribusiness.

2. Reform methodologies

The ADC could be structured with a policy advisory unit, if it were clear whom to advise. If USAID wants to supply ongoing policy advice to UNMIK, or either of the main political parties, a division of the ADC is the ideal place for that function. Based on its work with the sector, ADC management will have direct knowledge of those policies that are most needed or must be reformed to support growth in agriculture and agribusiness.

D) The Role of Institutional Development

Institutional development plays an important, but not major role in the above-recommended programs. WB/FAO programs focus on University, Min. of Agriculture and to a lesser extension service, development. The focus of the recommended USAID program is private sector institutions.

1. Key institutions to be developed

An important role of the ADC is the development of coops that can play a commercial role as intermediaries between small producers and “large” input suppliers and “large” output processors and marketers. The ADC will also support the continued development and progress toward sustainability of commercially oriented agribusiness associations and support institutions such as the KBA, RIINVEST and KACI. The formation of agribusiness trade associations, e.g., the Kosovo Flour Millers Association, should also be promoted.

2. Their development needs

The coops will need substantial financial, organizational, managerial and technical assistance. The needs of the private sector associations will need to be determined in consultation with them in light of USAID and activity objectives. Development of professional trade associations will enable technology transfer, management development and their participation in policy development and reform.

One major factor that must be included in program development and implementation is “socialism carryover.” It is very evident from conversations with “government” officials and social sector managers that Kosovars’ thinking is still extensively in the socialism mode, i.e., officials have grandiose and unrealistic plans and social sector managers are expecting to be taken care of by either NATO, UNMIK or the new government. This type of thinking is the result of Kosovo missing out on the global move from centrally planned to market economies. Reorientation to competitiveness based self-sustainability will need to be a part of all training and assistance programs. Significant basic accounting training will also be required.

E) The Role of Private Investment

Private domestic investment will play a major role in the above-recommended activities. Any potential client seeking ADC assistance will have to put up a considerable amount of the total project investment in the form of equity, in kind or in cash, or collateral for most of the finance to be provided. Unfortunately, investable assets are very scarce due to the police action, war and years of private sector suppression.

1. How it can be increased

By offering debt, technical and managerial assistance to the potential investor Through the ADC, the entrepreneur will be able to make their investment in the business with a greater degree of confidence. Therefore, they will be more likely to proceed with the business and invest larger amounts. In the short term, the assured availability of needed imported inputs via ARC will also increase investor confidence and therefore the amount of investment.

2. Types of investment support needed

In the first one or two years, investment-stimulating support will include access via the ADC to collateralized debt, and occasionally joint and mutual covenant supported debt where no collateral is available and the debt is modest. In later years investment support will include the screening, coaching and monitoring of borrowers for commercial lenders to improve borrowers ability to qualify for loans, and when necessary, guarantees to banks to enable them to lend to borrowers whose land or property title is not clear.

These same assistance services will make potential second party equity investors more comfortable and therefore more likely to invest. Therefore, as soon as practical an equity fund will be developed, sourced from Kosovars living overseas, venture capital investors and possibly supplemented by USAID Enterprise Funds. However, nearly all private sector investors were not interested in non-family member equity investors.

3. Target areas for investment

The main target areas for investment will be in private sector firms doing value added processing of Kosovar sourced raw agricultural materials, and later when they are privatized the former lessees of commercially viable large scale, integrated agroprocessing facilities (the former kombinats). Domestic investors will also be interested input supply and other service business, especially if ARC is supplying them high quality imported inputs until they become established. Emphasis would be placed on investment in targeted subsectors and priority products.

4. Suggested investment stimulation support mechanisms

ADC provided support mechanisms will include technical and managerial assistance including market research, marketing and accounting support, as well as domestic and international networking to identify customers, suppliers and potential partners for technology, market access

or investment support and significantly improved communications. The equity fund development work of the ADC will provide an excellent channel for venture capital type investment.

5. Potential domestic and international sources of investment

The main sources of domestic investment will be Kosovar entrepreneurs. Foreign investment may be sourced from venture capital investors, the Diaspora and foreign business partners.

F) The Role of U.S. and Other International Firms

In the short term, e.g., the next two years, it will be very difficult to attract serious scale international investors. The Kosovar market is small, infrastructure is inadequate, there is no significant legal environment and the status of the government is uncertain.

Nearly any agribusiness investor who learns that the UN, notorious for its non-commercial orientation and disdain for large agribusinesses, is administering the country will not take a second look at Kosovo.

1. How to stimulate investment or other beneficial participation by U.S. and other international firms

The ADC international professional managers and their counterparts will be developing local input supply dealers and connecting them with regional and international sources of quality inputs or services. The ARC will play an important role in introducing potential foreign investors to Kosovo agribusinesses via those foreign businesses supplying inputs or technology through ARC. As foreign companies get to know and become comfortable with the environment, they will more seriously consider investment. Investment protection insurance would also encourage international investment. The recommended subsector assessments will help attract investors, assuming they are positive. When Kosovo businesspeople are doing subsector specific study tours, they will meet potential foreign investors and ADC managers will encourage discussions about partnerships which could eventually lead to investment.

An innovative possibility for generating foreign investment would be to design a special label for Kosovo wine and market the product in wealthy countries as good wine and a good cause. Five dollars of every \$20 bottle of wine would go towards the Kosovo Agribusiness Redevelopment Fund. Given the significant quantity of high quality, vintage wine in inventory, and Kosovo name recognition, this program could generate considerable investment resources. The ADC's financial managers could manage the fund.

2. Target investments for international firms

International investment is most likely in the wine industry since it offers considerable scale and good export potential. There may be foreign investment potential in the sun seed processing plant and possibly the sugar beet plant, depending on the results of the viability assessments. Other possible foreign investment areas are hybrid seed duplication and sale, agricultural equipment sales (MF is already in Kosovo) and vegetable and fruit processing. However, the

latter will not happen until modern productive capacity is rebuilt, i.e., raw material yields and quality improve.

3. Most likely international investors

Large and medium size multinationals with experience in the Balkans and/or Eastern Europe are most likely, especially those already in the wine, sun seed and sugar beet processing industries. Medium size agribusiness investors with roots in Kosovo and or the Balkans may also be interested.

VII. Follow-Up Questions

At the meetings in Pristina and Washington where the results of this study were presented, and in comments received from the Mission, several issues were discussed. The following comments respond to those issues.

1. Is finance really needed, given USAID's relatively negative past experience with repayment?

- Like Conrad Hilton's ranked criteria for success in the hotel business (location, location, and location) the analysis conducted for this project reveals that the ranked constraints to the redevelopment of agribusiness in Kosovo are finance, finance and finance. While some entrepreneurs said they might be interested in technical and/or managerial assistance, by far the main reason they are not rebuilding their agribusiness is lack of capital. A program that does not somehow offer direct or indirect access to finance will have a minimal short to intermediate term impact.
- Highly qualified commercial lending professionals managing the program using the "hands-on" approach outlined in the recommendations and careful checks of borrowers local reputation, the authors believe that the repayment ratio for loans placed by the ADC will be very acceptable.

2. Why do you downplay the prospects for international investment?

- Together the consultants have nearly 60 years of private sector, international agribusiness development experience working with and for major cross-border investors, including executive level positions at ConAgra, Beatrice Foods and Cargill. Based on this experience, the consultants believe there is little or no chance of attracting foreign equity investment to Kosovo by agribusiness multinationals for at least the next 12-18 months, or until its legal status is resolved and a new government is in place. The only exception is the wine industry that has a highly exportable product and reasonably good facilities. Therefore, the recommendations assume only domestic and Diaspora investment will be available in the near term. While investment is unlikely, international agribusinesses would be willing to sell products into the market and probably provide management services and transfer technology. This is the usual first step in the investment cycle. We

also assume it will be quite some time before commercial credit will be available, especially other than micro credit.

3. How can Diaspora investment be optimized?

- One of the best potential sources of foreign finance is the Diaspora. However, how to utilize them is a challenge. They tend to support their own family members, not investment in general. It is possible however that a Kosovo Recovery Fund could be developed to which the Diaspora would contribute. For example, there are several stories of ethnic Albanian church congregations outside Kosovo contributing large sums of money to Kosovo rebuilding. Successful Diaspora may be interested in the investment aspects of a Recovery Fund. The proceeds would be used by the ADC to make debt, and occasionally equity, investments in Kosovo agribusinesses. Private sector firms do not want equity partners, but may be willing to accept Diaspora equity which they could buy back at a predetermined earnings multiple at a later date. USAID Enterprise Fund co-investing would help make a Recovery Fund more “marketable.”

4. Would it be better to target assistance on specific subsectors?

- It would take considerable time, research and effort to select specific target subsectors. Program impact can be optimized by establishing clear criteria for selecting projects to support, then getting as many expressions of interest as possible. The greater the number of projects to choose from the better the chance of finding real winners. The selection criteria will guide the process. In most cases the basis for success is the entrepreneur and his/her ideas and dedication, not the subsector. The subsector studies will help understand the business basics of that area, but by themselves are not a sufficient basis for focusing project resources.

5. Why would we support the redevelopment of the socialist kombinats?

- We do not recommend redevelopment of the kombinats. We do recommend quickly leasing former kombinat facilities to private sector entities that will develop and manage them as commercial businesses. If the entity can't develop a viable and financially sustainable business plan, and then execute that plan as per agreed milestones, they would not be supported. The use of former kombinat facilities is a small component of the recommended program, but a potentially very important one for increasing employment, improving exports and the food trade balance, creating cash markets for high value production and achieving a quick impact. Kombinat managers and employees should not be the only ones given an opportunity to lease the facilities, but they are the most likely to be interested. There is little prospect of the sun seed, sugar beet, wine, processed vegetables, seed multiplication and cleaning, and processed fruits businesses being redeveloped unless the kombinat facilities are utilized. New investments in these areas are not viable in the current environment.
- The seeming inconsistency between our statement that kombinat assets have a very low disposal value but considerable potential value as the basis for a business, and the non-viability of a new investment in the same business can be explained by the following

amplification of Bob Jimenez's example. Basically, the value of very modest assets to somebody who believes they can use them to make a living is much greater than the value of those assets to buyers who want to resell them. A badly deteriorated business can be successfully operated by people with no other opportunities, yet that same business can not justify significant new investment.

Following is a business example that demonstrates possible utilization of the kombinat facilities:

The Socialist Taxi Co. of Bordertown went bankrupt 10 years ago due to poor management and undisciplined employees. The bank had the police repossess their taxis. In the last 10 years all but two taxis has been stolen or stripped. One taxi just needs tires, some parts, bodywork and new seat covers. The other can not be recovered, but has the needed parts except for tires and a starter. Bob and Joe worked for Socialist Taxi in the old days, have just returned to Bordertown and they want to get back in the taxi business. They decide it will take \$5,000 to fix up the one taxi if they pirate parts from the other.

They go to the new Small Business Support (SBS) facility in Bordertown and apply for a loan to buy the two taxis and put one into operation. SBS contacts the police who say they don't own the cars, and due to a long series of bank mergers nobody is sure who does. SBS contacts the Bordertown junkyard and finds that they will pay \$300 for the two cars. SBS then gets the police to agree to hold a competition to lease the two taxis for a period of three years, by which time the real owners may have been determined and can be paid the \$300. The SBS helps potential lessors prepare their lease proposals. Due to their good knowledge of the taxis and the business, and their willingness to do a lot of the fix-up work themselves, Bob and Joe win the lease for \$10/month. The SBS has a client that is in the auto parts business and can provide four used but functional tires and a rebuilt starter to Bob and Joe. SBS convinces Bob and Joe that they can do the needed bodywork themselves with a few supplies, and can buy seat covers rather than the leather seats they had in mind.

Bob and Joe sign a management services contract with the SBS. SBS provides Bob and Joe with the tires and starter plus \$1,000 for the body work supplies, seat covers and the working capital needed for initial expenses, for an all in value of \$2,000. They also help Bob and Joe develop and implement an advertising program to publicize their services, and teach them how to do simple bookkeeping, budgeting and costing. Bob and Joe must pay SBS \$27.50 (\$2.50 for the bank and \$25 for the loan) every Friday, and discuss the taxi company's business with SBS personnel, or the bank will repossess the taxi.

At the end of their three-year lease Bob and Joe will have hopefully accumulated enough money to buy the taxi when the police auction it off. The stripped car and the taxi are still worth \$300 since the taxi is now operating and Bob and Joe can afford to pay that price since they have an ongoing business that can use the taxi. After the auction the police give the \$300 to the bank that is finally determined to be the owner. Bob and Joe have been able to make a decent living from the taxi over the three years and their business provided a service to Bordertown people so they did not have to call a taxi from a neighboring town. Several people from a nearby town considered buying a new taxi to serve Bordertown residents, but the monthly payments on a new, or even good used, taxi were too high to make the business sustainable since Bordertown residents

could not pay high taxi fares. Bob and Joe could survive with low fares since their investment was very modest, and Joe worked days and Bob nights, so the taxi was well utilized.

Replace the Socialist Taxi Co. with any kombinat; replace Bob and Joe with the “employees” of that kombinat; replace the taxis with a former kombinat’s facilities; replace the police with UNMIK, replace the SBS with the ADC and replace the unknown bank owners with the unknown kombinat owners. This is the approach we are proposing for quickly utilizing some kombinat facilities.

6. Why don’t your recommendations look more like a typical USAID program?

- We were asked to look for opportunities to increase employment and incomes, reduce rural to urban migration, and increase productivity and exports. Emphasis was to be placed on interventions that would have a quick impact and are market-led, private sector driven. Mission management expressed a willingness to be risk takers if the potential benefits were believed to be commensurate with the risks. The recommended program was designed to conform to these criteria, and therefore is not a typical USAID program, because Kosovo is not a typical USAID environment. The other important consideration is that there are +/- 240 NGOs, the Bank, FAO, and to a lesser extent the EU, all working on the emergency situation and almost nobody looking at how the rebuilding process can be used to develop a more viable, competitive and dynamic economy. Our focus was therefore on the latter.

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT



KOSOVO AGRIBUSINESS SECTOR ASSESSMENT

Final Report - Attachments

USAID SEGIR IV GBTI
Contract No. PCE-I-00-98-00013-00
Task Order No. PCE-I-02-98-00013-00
November 1999



Booz Allen & Hamilton Inc.
Cargill Technical Services Inc.

**Kosova Agriculture and Agribusiness Sector Assessment
and
Development Program Recommendations**

Attachment A

Map of Kosovo

Attachment B

**Agriculture in Kosovo: Background Note
Agricultural Institutions and Services in the Early 1980s**

Attachment C

**Kosovo Damage Assessment in Agriculture, Livestock and Animal Health Services
Kosovo: Damage and Needs Assessment in Agriculture
Review of the Agricultural Sector – Kosovo
Rapid Food Economy Assessment of Kosovo Province
Programme for Reconstruction of Rural Economy
and associated Working Papers on:
Livestock production (WP1)
Farm machinery (WP2)
Agro-processing (WP3)
Irrigation (WP4)
Forestry (WP5)**

Attachment D

Overview of Kombinat and Cooperative Facilities

Attachment E

**Kosovo Recovery Program
Re-launching the Rural Economy**

Attachment F

Contacts

**Kosova Agriculture and Agribusiness Sector Assessment
and
Development Program Recommendations**

Attachment A

Map of Kosovo

Map of Municipalities in Kosovo



Serb spelling above
 Albanian spelling below
 One name if same in both languages
 Dotted line is former boundary of Malisevo

**Kosova Agriculture and Agribusiness Sector Assessment
and
Development Program Recommendations**

Attachment B

Agriculture in Kosovo: Background Note

Working Paper 6 - Agricultural Institutions and Services in the Early 1980s

AGRICULTURE IN KOSOVO: BACKGROUND NOTE

Introduction: Agriculture in the Yugoslav Economy

During the late 1940s, Yugoslav leader Tito- following the Stalinist economic model- collectivized agriculture, and put half of agricultural land under state control with the remaining half to remain in the hands of the peasantry. This initiative was later rejected after dismal results, and most of the agricultural cooperatives were dissolved.

In 1953, a second agricultural reform was introduced limiting the maximum size of private land holdings to only 10 hectares. This reform remained in effect until another constitutional change taken in the late 1980s-early 1990s, mandating an increase of the maximum size to no less than 30 hectares. Nonetheless, during most of the post-World War II period, agricultural land and production in Yugoslavia has remained mostly in private hands. For example, as late as 1987, "...the 2.6 million privately owned farms in Yugoslavia accounted for 84 percent of all agricultural land."¹

The agricultural social sector was characterized by large agricultural kombinats (agro-industrial and food processing complexes), cooperatives, and state farms. "All governmental agricultural investments and subsidies were reserved for state farms and general agricultural cooperatives; this meant that social sector farming was usually more technologically advanced than private sector farming. Nevertheless, private farms far exceeded those in the social sector in overall basic equipment, livestock holdings, and land cultivated."²

In the 1980s, the agriculture sector was performing poorly and inefficiently in Yugoslavia.

The food distribution system was weak, farm incomes were low, and until the 1990 reforms, agricultural prices were under strict control. Moreover, because most investment funds were earmarked for the social sector, state farms showed higher yields than farms in the much larger private sector. State agricultural investment policies thus prevented application of modern agricultural methods in over 80 percent of agricultural activity, resulting in inefficient use of large amounts of agricultural machinery and artificial fertilizer.³

From 1973-1985, the government attempted to redress this balance in agricultural investment policy through the creation of Green Plans. These plans provided for the allocation of large foreign and domestic investment in the agricultural sector, as well as incentives for private

¹ Yugoslavia: A Country Study. Glen El. Curtis, Editor, Washington, DC: Federal Research Division, Library of Congress, 1990, p. 144.

² Yugoslavia: A Country Study. Glen El. Curtis, Editor, Washington, DC: Federal Research Division, Library of Congress, 1990, p. 144.

³ Yugoslavia: A Country Study. Glen El. Curtis, Editor, Washington, DC: Federal Research Division, Library of Congress, 1990, p. 146.

farming. “The Green Plans did increase crop yields somewhat, but in the late 1980s they were unable to overcome the inherent weakness of investment and infrastructure policy.”⁴

Kosovar economic origins: peasant-based agricultural economy

After World War II, Kosovo’s economy was characterized by family/clan-oriented economic activities, with an emphasis on agriculture, handicrafts and livestock. Kosovo’s natural resources had yet to be developed, and the economy was nearly entirely dependent on peasant agriculture. Kosovo was also Yugoslavia’s most agrarian region.

Geographic and climatic conditions in Kosovo

In the early 1970s, approximately 40 percent of Kosovo’s two basins (Kosovo and Metohija) was classified as cultivable- “...roughly coinciding with the low land in the two basins...of which one half is of excellent or good soil quality. Another 40 percent is classified as forests, and the remaining 20 percent as pastures and wasteland. The climatic conditions of the two basins are similar and characterized by cold winters and hot dry summers.”⁵ Rainfall tends to be low and irregular in all of Kosovo during the main growing season. “Traditionally the Metohija basin had a slight advantage in this respect since the streams from the western and northern mountain ridges permitted introduction of some irrigation.”⁶ Approximately 10 percent of Kosovo’s land was being irrigated at the time, although many of the irrigation systems were outdated and inefficient, and adequate water supply during peak growing seasons continued to be problematic.

Of the cultivable land, “about 77 percent...is classified as ‘arable’ and the remainder as meadows. About 80 percent of the arable land is used for cultivation of cereals, the remaining 20 percent for various industrial crops, orchards and vineyards.”⁷ Both regions heavily emphasized the growing of wheat and maize subsistence crops. “The major difference is the concentration of orchards and particularly vineyards in Metohija. For these crops, and probably vegetables as well, Metohija has a distinct competitive advantage over Kosovo...”⁸

Lack of self-sufficiency in food production

Despite the heavy emphasis on agriculture, Kosovo was not self-sufficient in the production of food. In fact, during the 1970s, Kosovo still had “... a negative overall balance in foodstuffs, due mainly to a less than optimal land use, insufficient precipitation and irrigation and high population density. The Province seems to be a net importer of cereals, some vegetables and fruits, dairy

⁴Yugoslavia: A Country Study. Glen El. Curtis, Editor, Washington, DC: Federal Research Division, Library of Congress, 1990, p. 144.

⁵ “The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions,” The World Bank, July 25, 1973, p. 9.

⁶ “The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions,” The World Bank, July 25, 1973, p.9.

⁷ “The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions,” The World Bank, July 25, 1973, p.10.

⁸ “The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions,” The World Bank, July 25, 1973, p.10.

products and most categories of processed food. Major surplus commodities are wine and some categories of processed fruits and vegetables”⁹

Agricultural Production of Major Crops in Kosovo (1000 tons)

<u>Agricultural Production of Major Crops in Kosovo (1000 tons)</u>			
	<u>1954-1963</u>	<u>1964-1966</u>	<u>1969-1971</u>
<u>Cereals</u>			
Wheat	119	235	219
Rye	10	8	7
Barley	13	10	15
Oats	18	21	21
Maize	140	186	209
<u>Industrial Crops</u>			
Hemp	3	2	1
Flax	-	-	15
Sugarbeet	30	97	53
Tobacco	3	3	2
Sunflower	2	7	6
<u>Other Crops</u>			
Potatoes	33	46	61
Beans	11	13	15
Cabbage	12	16	21
Other vegetables	n.a.	n.a.	61
<u>Fruits</u>			
Apples	8,200	9,980	13,100
Pears	3,480	3,660	5,770
Plums	17,600	16,460	18,480
Cherries	1,390	1,560	1,770
Apricots	320	470	260
Peaches	460	470	490
Walnuts	1,530	1,790	1,500
Grapes	14,500	29,100	42,000
<u>Source:</u> Statistical Yearbook ¹			

Sector organization: small individual/peasant-based farms and larger social sector kombinats and cooperatives

The agriculture sector was largely individual/peasant-based, accounting for 84 percent of GMP in 1970, with the remaining 16 percent held by the social sector. Most of the cultivable land- 89 percent- was in the hands of individual farmers. And most of the farms were quite small, ranging from 2-5 hectares, and designed for self-support rather than market opportunities.

As for the social sector, it consisted of "...six kombinats and some thirty cooperatives. The kombinats- the more vital units in the social sector- are as much oriented towards processing and marketing as towards agriculture proper; they absorbed almost all the investment resources provided for agriculture, of which a large portion ultimately was used for investment in processing and marketing facilities."¹¹ Most of the social sector was poorly managed, and accumulated substantial losses, especially from the late 1960s onward. A plan was then created to merge all of the major social sector enterprises into a single enterprise called "Agro-Kosovo."

As of the early 1980s, the balance between individual and social sector agriculture had shifted, with the social sector operating about "...540,000 ha of land (48% of total) of which about 55% comprises comparatively unproductive pastures and forest lands. The remaining 565,000 ha are held by about 96,600 individual farmers, with an average farm size of about 4 ha including 2.8 ha of arable land... Nearly 50% of agricultural land holders hold less than 2 ha, and over 75% have less than 4 ha."¹² As in the case of Yugoslav policy as a whole, agricultural investment was directed primarily towards the social sector.

A World Bank report in the early 1980s cited a number of constraints to increasing agricultural production in Kosovo. These included: "... (a) development policies which have favored the capital intensive social sector rather than the individual sector where the greatest production potential remains; (b) comparatively weakly developed individual sector services; (c) fragmented farms and (d) inadequate rural road and transport systems."¹³ The rural farming population was also quite conservative and slow to adopt more modern methods of farming. However, the greatest potential for increasing agricultural output remained with the individual sector, since it held the largest amount of arable land.

The 1981-1985 Kosovar Social Plan called for increasing cooperation between the individual and social sectors, with the social sector to provide more inputs and specialized services to the individual sector. There were also special tax and credit policy incentives to support increased cooperation.

Cooperation between the individual/peasant and social sector enterprises

¹¹ "The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions," The World Bank, July 25, 1973, p.10.

¹² "Staff Appraisal Report, Yugoslavia, Kosovo Regional Development Project," World Bank, March 30, 1983, p. 4.

¹³ "Staff Appraisal Report, Yugoslavia, Kosovo Regional Development Project," World Bank, March 30, 1983, p. 4.

There were many kinds of cooperation between the two agricultural enterprises. Social enterprises tended to supply services, such as seeding and harvesting. Where the two engaged in joint production, the social enterprises supplied inputs, such as fertilizer, seeds and livestock feed, breeding stock (e.g., cows, hens, calves), and extension advice and credit. The individual/peasant farms supplied labor, land, some feed input, and buildings.

Linkages between the two kinds of enterprises were weaker than elsewhere in Yugoslavia. “The much less important role of cooperation in Kosovo may be attributed to: (i) an adequate infrastructure on the part of the social enterprises, and (ii) a relatively smaller proportion of marketable surplus per individual... with which to pay off either monetary or physical credits.”¹⁴

Agriculture’s share of the economy and employment

As a consequence of rapid industrialization, agriculture as a share of GMP declined from “...48 percent in 1952 to 28 percent in 1970. But by 1971, still half of the population of Kosovo was dependent on agriculture, compared with 36 percent of Yugoslavia. Further, while the share of population in agriculture [in Kosovo] declined over the last decade, the absolute number remained stable, in contrast to the development in all of Yugoslavia where it declined by 20 percent.”¹⁵ In fact, Kosovo’s high population growth and low economic status contributed to an overpopulation in the agricultural sector.

Bank-recommended sectoral policy changes in the 1970s

According to the Bank’s analysis in the early 1970s, the sector had potential for more growth provided the appropriate policies could be adopted. Given the high population growth and unemployment rates, the Bank was against the expansion of the social sector at the expense of the individual/peasant farmers. Rather, it recommended that the individual/peasant sector be modernized, and the social sector be geared toward policy guidance and provision of extension and credit facility services to them. This would require, in turn, that the social sector be better organized and managed. Solving the irrigation problem would also require enhanced cooperation between the individual/peasant and social sectors.

The Bank also recommended a different output mix for both the individual/peasant and social sectors. “The optimal output mix of the social sector in primary production would be extensive crops, for which capital inputs are high and labor inputs low. The reserve is true for the individual sector...the emphasis would have to be on intensive crops [fruit, vegetables and grapes] and livestock, with some increase of the capital/land ratio, but no decrease of the labor/land ratio, with increased productivity of land as the overriding consideration.”¹⁶

¹⁴ “The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume III: Appendices and Statistical Annex,” World Bank, July 25, 1973, p. 25.

¹⁵ “The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions,” The World Bank, July 25, 1973, p. 9.

¹⁶ “The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions,” The World Bank, July 25, 1973, p. 12.

The Bank also recommended modern irrigation and land consolidation programs for Kosovo. The Bank's two projects (Ibar and Lepanac) aimed to convert some 30,000 ha of the Kosovo basin land to irrigation. Several storage lakes for major irrigation programs were also planned for the Metohija basin. However, one major constraint to enlarging the irrigation areas was land ownership. "Irrigation...can only be applied efficiently on sizeable plots. But the individual land holdings are not only small, they are frequently also fragmented into numerous parcels. Land consolidation thus becomes a prerequisite for the success of irrigation. Traditions and legal complications constitute formidable problems for consolidation."¹⁷

Land consolidation initiatives were in fact launched with the 1981-1985 Social Plan for Kosovo. It proposed to "...consolidate land holdings on about 30,000 ha of irrigated land, and some 5000 ha or rain-fed land, most of which was individually owned, as a first phase of a long-term consolidation program."¹⁸ Priority was given to land held under the two World Bank projects (Ibar and Metohija- see below for project descriptions).

Kosovo's Agricultural Institutions¹⁹

Agrocombinat (AIK). The agrokombinat was a large social sector agri-business which encompassed all aspects of the food system: input manufacture, primary production, processing, marketing, distribution, and retailing.

Agrokosovo. An umbrella AIK for all 18 agrocombinats in Kosovo. In this case, Agrokosovo was a Composite Organization of Associated Labor (COAL) comprised of 18 work organizations (the 18 smaller agrokombinats), 101 Basic Organizations of Associated Labor (BOALs), 75 Basic Cooperative Organizations, an Agro Commerce Work Organization, and the research Work Organization, Institute of Economic Development.

Basic Cooperative Organization (BCO). The basic production unit within large Commune-sized Agricultural Cooperatives (zadrugas). A "sub-cooperative", the BCO was organized on the same principle as the parent organization: BCO's delegates represented the organization in Assemblies of the Agricultural Cooperatives and also in the Federation of Cooperatives.

Basic Organization of Associated Labor (BOAL). The BOAL was the basic unit in which the Association of Labor takes place. The locus of all economic decision-making, the BOAL was an autonomous legal entity having its own income statement and balance sheet. Within an enterprises, the BOAL was the smallest distinguishable technological entity producing a marketed or marketable output.

Composite Organization of Associated Labor (COAL). Sometimes called a Complex Organization of Associated Labor. The Yugoslav term for an organization in which several

¹⁷ "The Economy of the Socialist Autonomous Province of Kosovo, Yugoslavia, Volume I: Summary and Conclusions," The World Bank, July 25, 1973, p. 13.

¹⁸ "Staff Appraisal Report, Yugoslavia, Kosovo Regional Development Project," World Bank, March 30, 1983, p. 18.

¹⁹ All information drawn from "Staff Appraisal Report, Yugoslavia, Kosovo Regional Development Project," World Bank, March 30, 1983.

enterprises have agreed to collaborate in accord with a self-management agreement. That agreement generally covered the pooling of labor and/or resources. An enterprise can be a member of several COALs.

Faculty of Agriculture (FA). Established in 1974, the FA was an autonomous body established by self-management agreement and linked to other organizations both inside and outside the University of Pristina by similar agreements. It was financed partly from public funds (about 70%), and partly by commercial type contracts with other Basic Organizations. Constitutionally, the FA had three functions: (a) basic scientific research; (b) adaptive research; and (c) higher agricultural education. FA contracted out staff for planning and supervising agricultural development projects of various kinds.

Federation of Cooperatives (FC). This federation, established in 1977, was comprised of representatives from 83 cooperatives, Basic Organizations of Associated Labor (BOALs), and Basic Cooperative Organizations (BCOs). A coordinating and planning organization for these agricultural organizations, the FC had decision-making power on matters crucial to the sector as a whole. FC's main role was to promote the association of agriculturalists and, through the BCOs, individual sector development.

Institute of Economic Development (IED). Established in 1976, a Working Organization within Agrokosova whose function was primarily research, analysis and planning. IED had also been given responsibility for preparation of regional agricultural development projects within Kosovo. IED was self-financed by payments for its services.

Organization of Agriculturalists (OAs). Each of Kosovo's 12 communal governments had an Organization for Agriculturalists. These OAs were associations of individual farmers grouped into agricultural cooperatives, basic cooperative organizations or basic organizations of cooperants [an individual sector farmer who chooses to enter into a production agreement with the social sector on a per annum basis], all of which were associated legally with the Federation of Cooperatives.

Veterinakos. This was the institution in Kosovo responsible for providing veterinary services to the individual sector.

Zadruga (Agricultural Cooperative). The Yugoslav term for agricultural cooperative, of which there were two types: (a) a cooperative closely associated with the social sector where the farmers were formally associated- that is all labor and resources were pooled, and; (b) a cooperative more loosely associated with the social sector. Member farmers shared all inputs, but retained private ownership of their land. Zadrugas could be comprised of several Organizations of Agriculturalists.

Past Bank Projects to the Agriculture (-related) Sector

Yugoslavia- Ibar Multipurpose Water Project, 1971, \$45 million equivalent

The project assisted in the financing of construction works, equipment and related studies for the development of the Ibar River for water supply, irrigation and power generation purposes. The Ibar project was the first phase in the implementation of the master plan to develop the principal rivers in the region, Ibar and Lepenac, to provide water for industry, communities, irrigation and power generation. The second phase included the Lepenac project (see below), which provided water mainly for irrigation. The main elements of the Ibar project were the construction of two dams, a 34 MW hydroelectric plant (generating 95 Gwh of peak power annually), 147 km of main water conduits, two pumping stations, irrigation (for 30,000 ha) and drainage networks, feeder roads and engineering services.

Development of the Ibar river was determined to be the least costly solution for supplying the industrial demand for water, which was expected to triple over the coming 15 years. The provision of an adequate and dependable supply of unpolluted water to communities also contributed to improving sanitary conditions and public health in the project area.

Yugoslavia- Metohija I Multipurpose Water Project, 1976, \$54 million equivalent

The project addressed the chronic problem of inadequate water supply for agricultural, domestic and industrial requirements. The project's objectives were to provide for intensive irrigation of 10,250 ha, of which 6,950 ha were owned by 2200 small-holder private sector families and the remainder by the social sector. It also supported the development of domestic and industrial water supplies in an area affected by water-borne diseases and whose industrial development was hampered because of inadequate water supply.

Specifically, the project supported the following components: (a) construction of the Radenic Dam; (b) a diversion weir with intake works and a feeder canal from the Decanska Bistrica River; (c) water supply works for three towns (Djkovica, Orahovac and Zrze) and twelve villages, including a water treatment plant with pumping equipment and new water storage facilities; (d) an irrigation distribution system; (e) miscellaneous works including drainage, erosion control, soil improvement, power supply lines, equipment, farm roads, buildings, demonstration farms and consultant services.

Yugoslavia- Kosovo Agricultural Development Project, 1981, \$90 million equivalent

The project's main objective was to increase productivity and incomes in Kosovo's rural regions. The project aimed to open additional opportunities for cooperative membership among individual sector farmers, improve agricultural market opportunities, and increase processed food and primary agricultural production. It also aimed to advance planning for small-scale farm irrigation from groundwater resources. In addition, it aimed to strengthen the appraisal and supervision capacity of Kosovska Banka Pristina (KBP).

The Bank loan financed 85% of the total estimated foreign exchange cost, and about 33% of total project costs including interest during construction. The \$90 million was allocated as follows: \$57m for sub-loans for agro-industries; \$20.5m for sub-loans for vineyards, orchard and berry plantations; \$2m for sub-loans for studies; \$0.5m for technical assistance; and \$10m for interest during construction.

Specifically, the project consisted to the following: (a) modernization, expansion, and construction of 12 food processing facilities in the social sector; (b) new vineyard and orchard plantations, including 1,994 ha in agro-industrial holdings in the social sector and 650 ha in family holdings in the individual sector; (c) construction and supply of livestock for a goat farm of 1200 head capacity in the social sector; (d) livestock acquisition and shed construction for 300 small dairy farmers in the individual sector; (e) provision for groundwater studies and related agro-economic studies, pumping tests and test well installations for irrigation development; and (f) provision for technical assistance to the borrower, KBP.

Yugoslavia- Kosovo Regional Development Project, 1983, \$79 million equivalent

The project objectives were to generate economic activity throughout rural Kosovo, though with a focus on individual farmers in its least development communes. It was done through the development of a more productive individual sector and through strengthening the institutional capacity of Kosovo's major development bank, Kosovska Banka, Pristina (KBP) and the Federation of Cooperatives, Kosovo.

Through an integrated approach, the project: (a) increased individual sector on-farm investments for livestock, crops, fruit and vegetable production; (b) provided short-term credit for about 36,000 tons of incremental fertilizer consumption by individual farmers; (c) strengthened and improved provincial services, including marketing opportunities for individual sector farmers; (d) upgraded village access roads; (e) supported the Province's land consolidation program in six of the project communes by providing additional equipment for the Geodetic Bureau; (f) improved rural communications by providing equipment and staff training for the Province's radio stations; and (g) contributed to institution-building within KBP, the Federation of Cooperatives (FC) and the Institute for Economic Development (IED), as well as other provincial services, including agricultural extension, veterinary and cooperatives.

The investments supported and complemented previous Bank projects and was designed to generate agricultural activity throughout Kosovo, though with special emphasis on the 12 least development communes. Specifically it aimed at: (i) increasing agricultural production; (ii) improving rural incomes; (iii) increasing capacity utilization of existing social sector agro-processing facilities; (iv) increasing individual farm sector incomes thereby improving rural living standards; and (v) reducing income disparity between less-developed communes and those with higher per capita incomes, and between the rural individual and social sectors.

WORKING PAPER 6

AGRICULTURAL INSTITUTIONS AND SERVICES

IN THE EARLY 1980s

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ORGANIGRAMME

A. INTRODUCTION

In the early 1980s, the economic and political institutions in the Kosovo Province, like those in the rest of the Former Yugoslavia, were based on the principle of decentralizing power to the workers. The conventional bureaucratic hierarchy, with its over-riding authority, was deliberately

avoided and a system of autonomous/decentralized cooperative-type of organizations had been developed and refined.

The agricultural sector was divided into two sub-sectors: the Social Sub-sector in which individuals had organized themselves and pooled all their resources on a semi-permanent basis (under certain conditions they could withdraw their resources provided this did not harm the affairs of the group), and the Individual Sub-sector under which conditions of pooling the resources were much less complete and demanding. The Individual Sub-sector dominated in terms of land holdings (88% of total cultivable area), produced 83% of the annual Social Product in 1975 and occupied 95% of the agricultural labour force in 1971.

Each organization was built up from a variety of small, independent units, linked together in various combinations, whose internal and external relations were defined by public and legal contracts called **Self-management Agreements**. These agreements set out the aims of the unit, define its financial and administrative operations as well as its time frame, and ensure its basic equality and autonomy.

In the Social Sub-sector, the fundamental economic unit was called **the Basic Organization of Associated Labour (BOAL)**. By law every economic entity, which owned more than 10 hectares of land (more over 500 metres of altitude), or employed more than five salaried workers, had to constitute itself in a BOAL. This was a small unit of workers, usually fairly homogeneous, often part of a larger enterprise (but not necessarily so), which produced a marketable or identifiable product. In the socio-political context, the equivalent basic unit was **the Commune or Sub-commune**. This was usually much larger (perhaps an average of 40,000 people) and also based on a geographical unit. There were at that time 29 such communes in Kosovo.

Each of these units had two operational bodies, a Workers Council and an Executive Council. The Workers Council was composed of delegates from the workers and the Executive Council of delegates from a Workers Council. Where units consisted of less than 30 workers, all members of the unit served in the Workers Council. The BOAL's management was also appointed by the workers and was therefore responsible to them, not vice versa. The management had the right to propose disciplinary measures against personnel, but not to hire and fire. Conversely, the management may be recalled at any time by the workers themselves.

The Individual Sub-sector operated on the basis of individuals, but because of previous weaknesses in the linkages between the two sectors, an intermediate type of fundamental unit, **the Contractual Organization of Associated Labour (COAL)** was being heavily encouraged. In a COAL, income was shared not only on the basis of labour inputs (like the BOAL) but also according to the share of resources that individual members had contributed to the unit. However, the eventual intention was that individuals should be repaid the value of their contributed resources, that the right to further income from ownership shall cease and that the unit then became a fully egalitarian unit, or BOAL.

The organization of farmers was governed by the Law on the Association of Farmers (Kosovo 1979), under which **Agricultural Cooperatives**, similar to COALS's, may be established by mutual agreement. However, farmers could join these associations on either a permanent or a temporary basis. Permanent members of these cooperatives were known as "Associated Farmers" and temporary members, as "Co-operants". Associated Farmers committed all or some of their resources on a permanent basis and shared in both profit and risk-taking. For this they received certain privileges such as subsidised inputs and services; preferential access to goods and services in short supply and access to long-term credit. Co-operants contracted to the cooperative on a short-term (often-annual) basis and had the same rights as the Associated Farmers to

participate in policy formulation and decision-making. However, they did not share in the distribution of income, they did not receive the same privileges as the Associated Farmers and they could obtain seasonal credit only. Farmers, who were not contractually associated with the cooperatives in any way, obtained their fertilizers and other inputs from the cooperatives for cash on a purely commercial basis.

Basic cooperative unit (BOALs, COALs and Farmers Cooperatives etc.) could enter into similar Self-management Agreements with one another to form a joint enterprise or **“Working Organization”**, and in turn a Working Organization could join together to form a **Composite Organization of Associated Labour, or Kombinat**. Basic units could be members of several Working Organizations and a Working Organization a member of several different Kombinats. By their nature, such forms of association were more flexible than the basic units of which they were made up and in each case the financial independence and authority of the basic unit was preserved. Representation at each level of association was by successive delegation. Delegates, who could be either elected or appointed, had to represent the views of their constituency on the body to which they were delegated. They were expected to retain their status as workers and to return to this status when their appointment was terminated. Delegates could be recalled by their constituents at any time if their performance was regarded as unsatisfactory.

A seventh type of organization was **the Work Community**. This is similar in form to the Working Organization in that its members were organizations of individuals, not individuals themselves. However, unlike the working organization, the work community was designed to carry out special services for its members and its workers were salaried employees, not decision-makers. Separate work communities could undertake such specialized services as administration, planning, accounting, banking and research and carry out these services for their members on the basis of the costs, including the salaries of their workers and of the management.

Under this system, the role of the federal government was confined to a broad consolidation of policies, strategic planning as well as legal and regulatory activities, since many of the functions often undertaken by the central government were carried out at the local level by the communes or by the cooperatives. The **principle of decentralization**, which was established and strengthened over a number of years, meant that any proposal for greater centralization in a particular area had to be very carefully considered. With so many autonomous bodies working in the field, coordination of their policies and operations became a major consideration of any broad development programme.

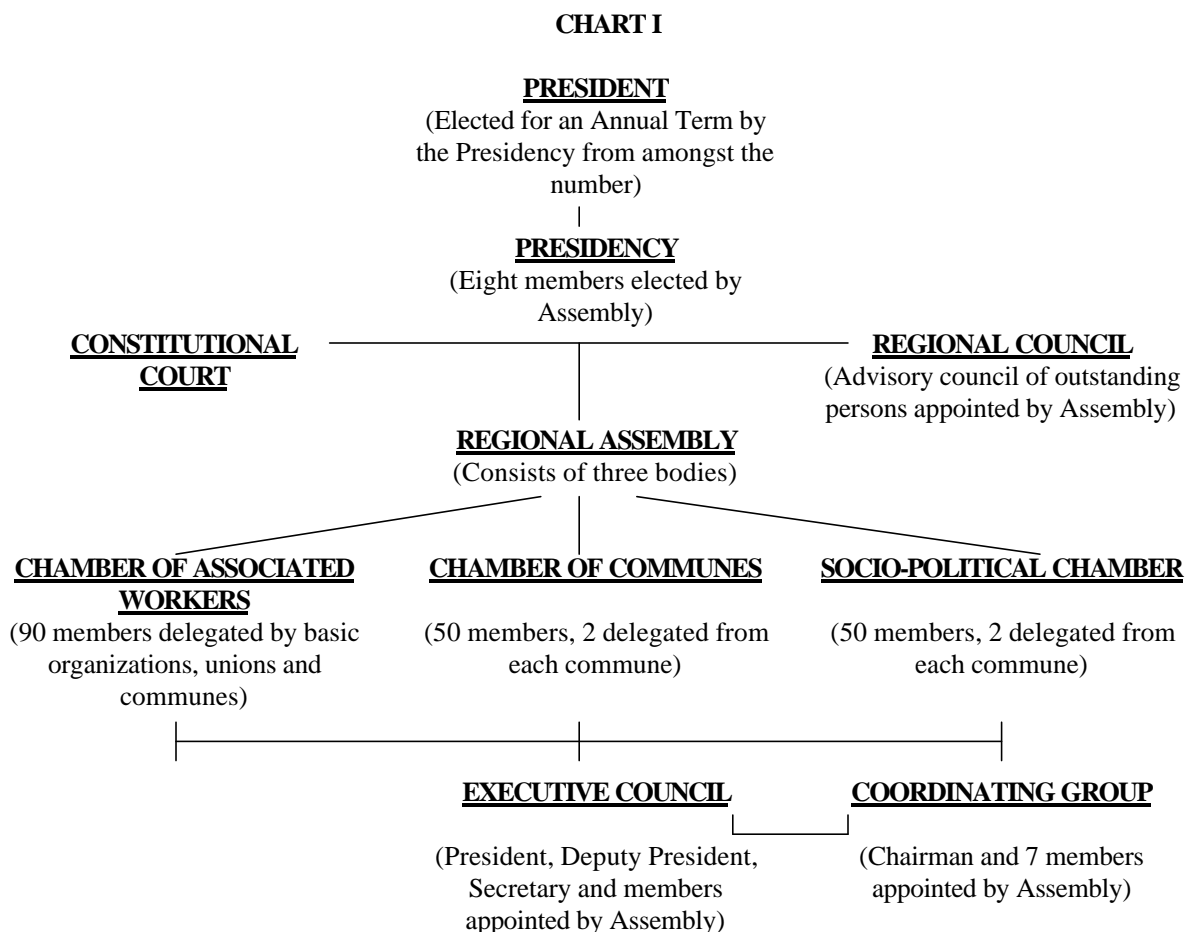
B. PROVINCIAL PLANNING AND COORDINATION

General

The institutions responsible for planning and coordination at the provincial level were: Provincial Government, Coordinating Group and the Institute of Social Planning, including the Provincial Fund for the Development of the Individual Sector; Secretariat of Agriculture; Socialist Alliance; League of Communists; Federation of Cooperatives; Kosovska Banka (BANKKOS); AgroKosovo; University of Pristina, Faculty of Agriculture.

The Provincial Government

The structure and systems of election in the provincial government and assembly were as follows:



The Agricultural Coordinating Group

As a result of proposals made by World Bank in the late 1970s, a permanent coordinating group had been established by appointment from the provincial assembly in August 1980. The committee contained representatives of the Federation of Cooperatives (Chairman and Secretary), AgroKosova, the Secretariat of Agriculture, the University Faculty of Agriculture, the Provincial Institute of Social Planning and the Associated Bank of Kosovo. The coordinating group was responsible to the provincial assembly for all matters pertaining to regional agricultural development.

The Provincial Fund for the Development of the Individual Sub-sector

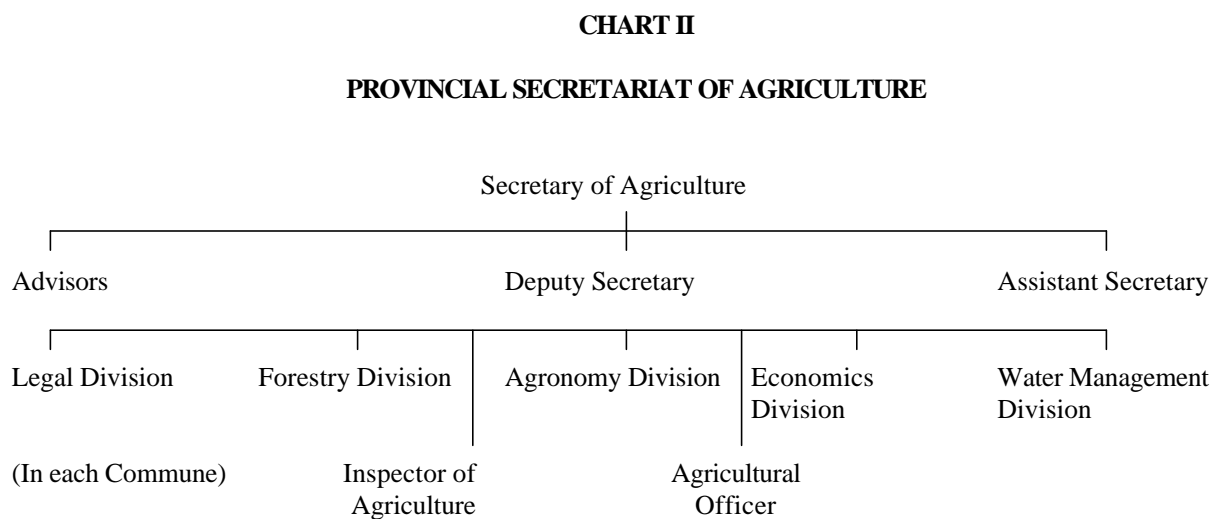
This fund, established by federal law in 1972, consisted of monies from both federal and provincial sources. Approximately 4-5 billion dinars per annum were contributed during the late 1970s by the Federal Government and this was matched by about 3 billion dinars per annum from the Province. The fund was administered by a separate coordinating group set up by the Assembly and composed of members from the Socialist League, the Federation of Cooperatives, AgroKosovo, the Institute of Social Planning, the Secretariat of Agriculture and Bankkos and 10 members delegated by the Commune assemblies. The monies were allocated to the communes on the basis of annual programmes submitted through them by the cooperatives, which were collated by the Federation of Cooperatives before submission within the framework of a general policy determined by the coordinating group. The degree of support to individual projects was decided and particular programmes could attract different degrees of finance in different

communes- e.g. artificial insemination could attract a 50% subsidy in one commune and only a 30% subsidy in another. Payments were made to individuals and groups on evidence that works had been completed. A variety of agricultural development activities from the subsidisation of seed and milk prices to the building of cowsheds and grants for scholarships or shows had been supported.

The Secretariat of Agriculture

The Federal Government was represented at provincial level by a number of secretariates of which the Secretariat of Agriculture was an important one. This Secretariat was concerned mainly with policy, legal and regulatory matters. It was represented at commune level by an Inspector, concerned with the application of federal laws of land utilization, etc., and by an Agricultural Officer concerned with planning and coordination.

The structure of the Secretariat was as follows:



The Socialist Alliance

The Socialist Alliance was a broadly based socio-political organization, which functioned as a forum for the discussion of social, political and economic issues and policies. It sent delegates to the various levels of socio-political chambers of assembly and its officers could serve on the various committees of the assemblies, in, for example, the administration of the Fund for the Development of the Individual Sector.

The League of Communists

The League of Communists was also a socio-political organization but its support was much more narrowly based than that of the Socialist Alliance. Like the latter, the former acted as a forum for the consolidation of members' opinions and views on issues and policies and it was represented by delegates in all the socio-political chambers of assembly. Its members were also represented on the Executive Council of all levels of economic units and exerted a powerful influence on political and social development. The League of Communists had coordinative functions at higher levels of the provincial Government and supported the provincial television and radio programmes for farmers.

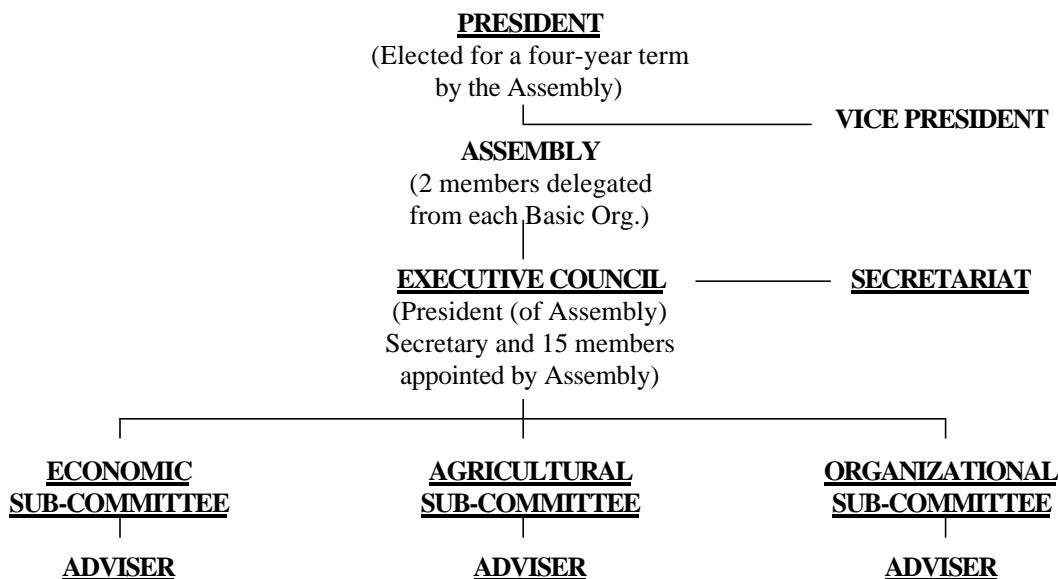
The Chamber of Economy

In addition to their voluntary membership in Kombinats, all working organizations had a mandatory membership in the Chamber of Economy of their province. This association provided a forum for its members to coordinate policy and act as a link between working organizations, as well as between them and other organizations. The chamber also had the responsibility for establishing professional standards and standards of performance and for helping harmonise different stages of production within an industry. It covered all economic activities over a given area, in both the social and individual sub-sectors.

The Federation of Cooperatives

The Federation of Cooperatives was concerned with horizontal coordination between the cooperatives, which are its members, rather than the vertical coordination, which is the function of the Chamber of Economy. The Federation's main tasks were to develop and strengthen the cooperative movement, assist with the establishment and registration of cooperatives and coordinate their activities. Its organizational structure was as follows:

CHART III



The advisers to the Federation of Cooperatives acted as trouble-shooters for members. To some extent, they also had a training role and assisted in planning investments for cooperatives and in arranging financing. In the agricultural cooperatives, they had policy and programme coordinating functions, providing the agronomists employed by the cooperatives with broad outlines of major activities for each year.

Kosovska Banka (BANKKOS)

In the Former Yugoslavia, banks were neither commercial, profit-making organizations, nor working organizations or Kombinats but were rather constituted along the lines of **a credit union as “Work Communities”**. Members were the basic organizations and deposited funds with the banks or borrow from them. The members of a basic work community assumed all liability for its operations and as such the bank did not accumulate financial assets nor generate income for its members. Banks could be:

- (a) **Internal**; operating within a working organization or Kombinats;
- (b) **Basic**; all-purpose with smaller basic organizations as its members;
- (c) **Associated**; established for a particular specialist purpose. **Kosovska Banka or BANKKOS** was an associated bank and the major bank in Kosovo Province. It had both commercial and investment functions and it was also responsible for the administration of federal funds. Bankkos had its head office in Pristina. Its members were working organizations and **seven basic banks**, which had offices throughout the province.

AGROKOSOVA

AgroKosova was a **Kombinat** (see Organigramme 1), which was formed by a number of agricultural working organizations in Kosovo for the purpose of long-term planning, coordinating members activities, research, development and marketing their products. In the early 1980s, it was made up of thirteen working organizations which processed agricultural produce ranging from milk and wool to fruit. In addition there were two exporting organizations, an internal bank, a marketing organization (AgroKosova Kommerce) and, in partnership with the University of Pristina, an agricultural research institute (the Biotechnical Institute), all of which being working organizations and units of the Kombinat. (See Chart). Each working organization was sending delegates to the Kombinat Assembly, which was meeting when needed, and selected an 18 member Executive Council which was meeting more regularly. Other working organizations could also join the Kombinat by agreement.

The Kombinat was managed by a Director General who had six management communities to assist him: general, cooperation, crops, orchards, livestock and trade. Each of these consisted of a small *ad hoc* group of delegates from the member organizations and a one-man permanent executive secretariat.

Below is an example of working organizations in seven communes connected with AgroKosova and in two others in the process of affiliation:

<u>Name</u>	<u>Main Products</u>	<u>Commune</u>	<u>Basic Organization</u>
Drenica	Poultry	Glogovac	3
Sar-Prizodi	Wool	Dragas	1
Malisgan	Agricultural Seeds	Klina	4
Kosovo	Poultry	Lipljan	3
Orahovac	Wine	Orahovac	5
Produkta		Srbica	2
Suva Reka	Carbonated drinks and fruit juices	Suva-Reka	3
		Vitina*	3
		Vucitrn*	2

Note: * In the process of affiliation with AgroKosova.

University of Pristina

The University of Pristina was established in 1970 on the foundation of a number of colleges of further education. At that time, there were four faculties – law, arts, medicine and engineering.

These were joined in 1974 by the Faculty of Agriculture, which was founded on the basis of several institutes of higher education in agriculture. Like other institutions in the Former Yugoslavia, the Faculty was an autonomous body established by self-management agreement and linked to other organizations – both inside and outside the University – by similar agreements. It was financed partly from public funds (70%) and partly by commercial-type contracts with other basic organizations. Constitutionally the faculty had three functions: basic scientific research, adaptive research and higher agricultural education. The basic research was mostly officially funded; adaptive research was financed by contracts with working organizations and AgroKosovo and students were financed by individual scholarships from their basic organization (also subsidised by the Provincial Agricultural Fund). The faculty also contracted out its staff for planning and supervising agricultural development projects of various kinds.

C. COMMUNE PLANNING, IMPLEMENTATION AND COORDINATION

General

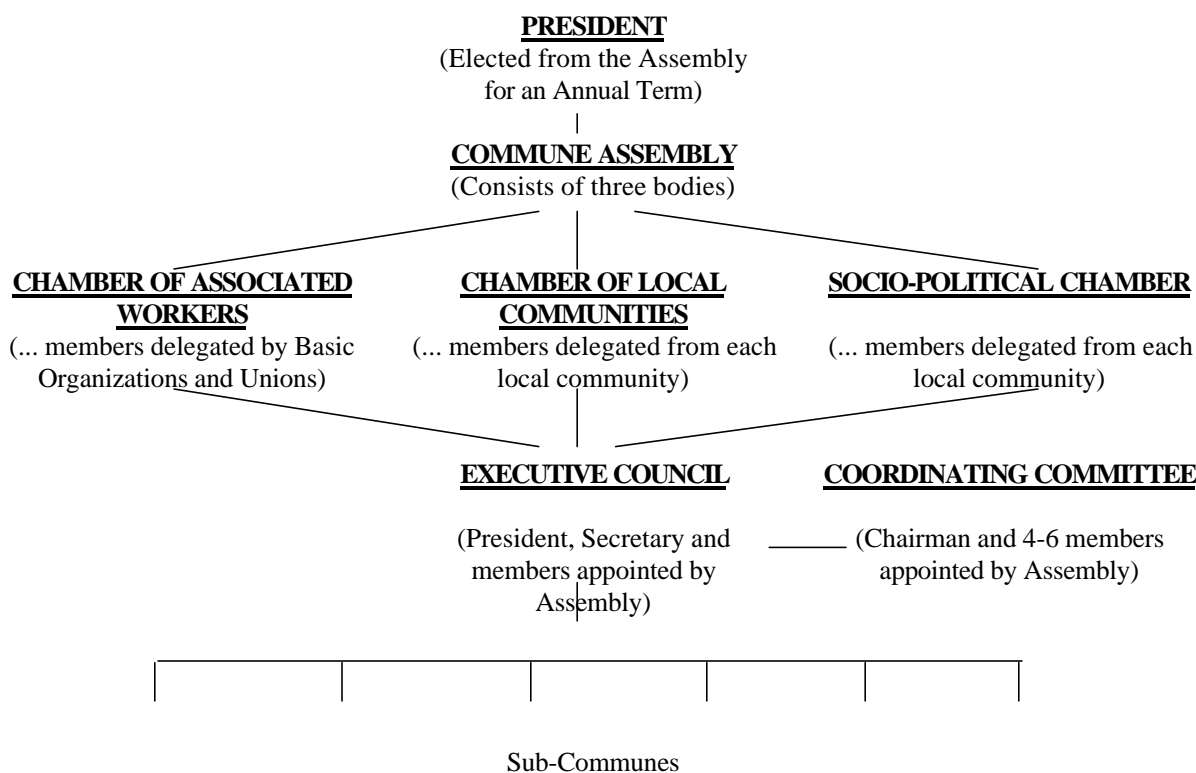
The institutions responsible for planning, implementation and coordination **at the commune level** were:

- Commune Assembly and Coordinating Committee;
- Basic and Working Organizations.

The Commune Assembly

The Government at the commune level had a structure similar to that of the provincial level:

CHART I



Basic Organizations

During the late 1970s, the number of cooperatives, particularly those dealing with the individual sub-sector, had been substantially increased. Even so, only 6,471 (14%) of the total number of farming families (total for 1971) had become Associated Farmers. Approximately another 10,600 (22% of farming families) were active Cooperants at the time of the Mission visit - i.e. the cooperative movement included about one-third of those families who obtain the whole or part of their income from farming. As the number of tractors and farm implements owned by individuals increased, the area of land in the individual sub-sector significantly declined, but the number of farmers using the cooperative for other services - e.g. the supply of fertilizers, improved seeds and cattle feed - increased by nearly 100%. In fact, practically all farmers used the cooperative

services in one way or another but some of those services - e.g. extension, credit and certain subsidies - were limited to those with formal membership.

D. BASIC AGRICULTURAL DEVELOPMENT SERVICES

General

The basic support services in agriculture were:

- (a) **Extension;** including Agricultural Education and Training;
- (b) **Credit;** for input supply and distribution;
- (c) **Research;** on agricultural produce, collection and marketing;
- (d) **Animal Health and Breeding.**

Extension

Extension has never been a word commonly used in Kosovo. It may be defined as follows:

- the provision of technical and economic information to farmers, upon which they can base decisions on both long-term policy and the day-to-day management of their farms;
- inducing the farmers to accept innovation or innovative systems which would enable them to use more fully the potentials of the resources available;
- ensuring that changes in farming systems are supported by the necessary range of inputs and services through liaising between the farmers and the suppliers of inputs and services;
- assisting small farmers in creating or developing local organizations or groups which will enable them to receive information, inputs, services and other forms of assistance on the most cost efficient basis;
- promoting the improvement of living and working conditions within the whole farming.

Organization of Extension Services and Staff. The main responsibility for the provision of extension rested with the basic cooperatives in the communes, and the farmers' associations which deal with the individual sector. The cooperatives in each commune employed a variable number of agriculturists (agronomes), one of whose duties was to advise Associated Farmers and Cooperants on modern techniques of farming. The number of agriculturists in each commune and the ratio between them and the farmers to whom they supply their services, varied considerably (Table 2) as did the degree of attention they paid to the cooperants.

The group of agriculturists in each commune, or cooperative, worked under the director of the cooperative and there was no direct professional supervision, though by experience and capability a more senior man may in fact have acted in this capacity. At the provincial level, the resident agriculturists received some professional support from the agricultural advisers in the Federation of Cooperatives, who supplied a broad annual policy programme and made occasional visits in the field.

Education and Training. The agriculturists at the commune level were either "ingenieurs" (i.e. graduates from the Faculty of Agriculture at Pristina from one of the two agricultural training institutes) or "technicians" with only secondary school education.

In October 1974, the faculty admitted its first intake, consisting of 240 students. The course was a 4-year course and only about 30 students graduated each year between 1978 and 1980. Admittance and graduation were as follows:

	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Admittances	240	240	240	300	320
Graduates	-	-	30	30	(20-30)

In line with this reorganization, the under-graduate degree had been changed from four years of general studies to two years of generalisation and two years of specialized courses; in agricultural economics, animal husbandry, animal health, crop husbandry and water management in the last two years. Courses for graduates in field positions included crop and animal husbandry, rural sociology and extension methodology

Two agricultural training institutes, in Pec and Pristina, also gave a four-year course, but entry is at the post-elementary level (after eight years of elementary school) rather than post-secondary (four-year secondary). The course included elements of agricultural science, general agriculture, orchards, vineyards, irrigation and a little animal husbandry.

Secondary school technicians, who comprised 68% of the field service, had no longer-term formal training in agriculture though the curriculum at most rural, middle or secondary schools, included some agricultural subjects.

The Faculty of Agriculture initiated a programme of sinter in-service training seminars for agricultural staff (and some farmers). In 1979-80, three seminars were held at centres in Pec and Pristina, covering the major staple crops. About 100-150 staff attended each of these seminars and most, but not all, field staff participated in at least one.

Duties. The duties of the agricultural staff included advice to farmers, the collection and compilation of crop production and area statistics, *ad hoc* surveys, assisting farmers to obtain credit, technical supervision of their loans, carrying out a small amount of adaptive research, the inspection of agricultural weights and measures and administrative functions in the cooperative. Extension staff was not concerned with regularly duties or loan recovery. Regulatory duties were

carried out by a separate, official Inspector of Agriculture in each commune and the recovery of agricultural loans was achieved mostly through cesses on produce sold through the cooperatives. Agriculturists, at each level of qualification, could specialize in various aspects of the field work which are locally significant but this was largely a matter of personal interest and no specialized training was given. Specialists in orchard crops and plant protection appeared to be fairly common. There were viniculturists in vine growing areas and a few animal husbandry specialists, but farm management economists, pasture agronomists and irrigation agronomists were entirely absent.

Extension Programmes and Methods of Work. The agronomists visited only the Associated Farmers on a regular basis and these visits were almost entirely in response to requests from the farmer or in order to supervise loans. Cooperants were also visited very occasionally, but other farmers in the area were not visited at all, though they were welcomed to attend such group activities, mostly in the winter period. Very little group work was attempted, but when farmers were warned of forthcoming meetings the attendance was good and numbers up to 60 have been recorded. Visits were usually planned only a day or so in advance and were usually for trouble-shooting. The concept of planned, pro-active extension seemed to be unknown.

Physically the agriculturists divided the area between themselves, taking into account topography, roads and cropping patterns, and each had a prime responsibility for between 6 and 15 villages. A record of visits was kept in the form of a diary and each visit was signed for by a farmer. No further reports appeared to be kept.

Mass Extension Programmes. A half-hour television programme for farmers was broadcast in Serbo-Croat and Albanian every Sunday at 9 a.m. Many of the farmers interviewed said that they viewed the programme with great regularity though none were able to detail any innovation they had adopted as a result. Radio Pristina also broadcasted a daily radio magazine programme of news, views, talks and interviews at 5.30 each morning. Fewer farmers said that they listened to this. Both of these programmes were produced by specialists agricultural staff, though field staff were often asked to contribute. Broad policies and the selection and timing of material to be broadcast were decided by the League of Communists and coordination with field programmes was indirect and informal rather than direct and active. Technical agricultural publications were produced by many organizations and the standard of presentation of some of was quite high. However, most were directed at a professional, rather than a farming audience for whom the material could be presented in a more simple and digestible form.

Technical Content

Technical programming - the determination of what technical matters to concentrate on at particular times in the cropping year - was limited to the annual programme published by the advisers to the Federation of Cooperatives. Each field agriculturist had a copy and refers to this when asked about programming. However, the technical directions contained were very broad and common to the whole province. The technical advice presented to the farmers was either detailed solutions to day-to-day problems or more broadly based on standard formulae which farmers themselves may, or may not, adapt to local conditions. For example, advice on fertilizer applications appeared to be standard for each crop regardless of the season and variations in soil or micro-climate. Advice also frequently seemed to be based on general professional considerations rather than careful experiment and rarely took into account marketing, cost/benefit or other economic considerations. This may be because the agriculturists concentrated almost exclusively on crops and products which were sold to the cooperatives and for which there was therefore, no marketing problem. Animal feeding, breeding management, livestock housing (apart

from new buildings on small farms), pasture management and water management did not appear to be included.

Extension Work with Farm Women and Young People

There were not extension programmes specifically aimed at farming women despite their critical role in the village economy. Also there were no specific extension programmes directed towards young people in order to enhance their knowledge of farming and farming skills and therefore to develop positive attitudes to farming as a career, or to make the village environment more attractive to those who would form the next generation of farmers.

Salaries, Allowances and Deductions

All workers in the Former Yugoslavia were guaranteed a certain minimum living wage which was established and regularly updated by each republic or provincial government. Above this, each cooperative determined a basic wage for each level of staff which was then agreed with each individual by contract. It was mandatory for 75% of this wage to be paid, whatever the financial circumstances of the cooperative. To this each worker in the cooperative could add a share of the income of the cooperative related to his work and predetermined by contract - e.g. an agriculturist could be paid a share of the income resulting from extra maize sales due to a hybrid seed programme. If the cooperative made a loss, deductions could be made up to 25% of the agreed basic wage of the worker, provided this did not reduce it below the provincial minimum wage.

Illustrative basic wages of agriculturists were as follows:

Agriculturists Salaries

	<u>Gross</u>	<u>Net</u>
Managers	Din 13,100 – 16,000	Din 9,600 – 10,800
University Graduates	“ 12,000 – 14,600	“ 8,700 - 9,900
Institute Graduates	“ 10,200 – 12,500	“ 7,000 - 8,700
Technicians	“ 9,700 – 12,000	“ 6,000 - 7,900
Labourers	“ 6,000 - 8,000	“ 4,500 - 7,200

Allowances

- **Overtime**: some cooperatives paid overtime at varying rates;
- **Nights**: most cooperatives paid night allowances of up to 50% of daily salaries;
- **Family**: some cooperatives paid allowances for children at variable rates usually between Din 250-350/month.

Regular deductions between 25% and 40% of gross salary were made from all workers wages to pay for social welfare, health insurance pensions etc. Small amounts, amounting to no more than one or two dinars a month, were deducted at source for union and party funds. In addition levies could be made for community purposes by the local authorities for specific projects such as a road, a community office etc. However, total deductions were not allowed to put any worker's emoluments below the basic living wage.

Houses and Offices

Almost all the agriculturists were located at commune centres and lived either in the central township or in villages nearby within commuting distance. No official houses were provided. Agriculturists usually shared a small office between two or three at cooperative headquarters.

Transport and Equipment. Cooperatives usually had a pool of personnel transport vehicles at their headquarters. These consisted of cars, usually the Zastava 101 or occasionally the smaller Zastava 750; and four-wheel drive vehicles such as the Gaz, Jeep or Landrover. Agriculturists shared these vehicles, often on a joint basis, but the cooperative management usually had priority, so that keeping to a regular planned programme of visits would be difficult. Distances, however, were not great as most communes were only about 400 km² in area, so that extreme distances from the central township did not exceed 20 km and much travelling was done on foot or by the usual country transport facilities. Equipment was limited to that required for measuring land and weighing produce in accordance with agriculturists' statistical and research duties.

Recent Performance. The existing combination of advisory services, input supplies, credit and positive attitude from the farmers appeared to have worked quite well within its limits; fertilizers were used by almost 100% of farmers, improved wheat seeds by almost 100%. Improved livestock could be found in all areas and there was a small but significant number of progressive farmers (the Associated Farmers) throughout the whole area.

Constraints. The main institutional constraints were:

- the limitation of extension and other inputs, largely to Associated Farmers;
- the concentration of extension on the main staples and marketable products to the exclusion of other crops, especially vegetables and animal husbandry;
- the lack of an annual programme of carefully determined precise, quantifiable innovations for farmers;
- the absence of any concept of planned timetables of visits to the villages;
- inadequate research support, especially concerning specific recommendations for various soils and micro-climates;
- insufficient basic training and lack of a regular programme of in-service training geared to the annual extension programme;
- inadequate training of subject-matter specialists;
- over concentration on contact farmers;
- too wide a range of duties which interfere with the primary duty of extension;
- lack of professional supervision and support and an overall lack of cohesion in the extension effort;

- the absence of supportive extension programmes for farming women and youth.

Plans for Development. In November 1977, a Social Compact for the formation of a Specialised Service for the Advancement of Agriculture in the Individual Sub-sector was signed by the Provincial Assembly, the Executive Councils of Commune Assemblies and other economic and socio-political organizations in the Province. This provided for the establishment of a provincial extension service staffed by two or three graduates at both Provincial level and in each commune. By 1980 little progress appeared to have been made in the implementation of this plan and many communes proposed individual measures for expansion and strengthening their extension services.

Research

Owing to its geological history and situation, the province of Kosovo exhibits a particularly wide variety of soils and microclimates. Most farms were very small (average 2.39 ha) and many (30%) were part-time subsistence producers. This was putting an additional responsibility on the research organization to develop as widespread a system of adaptive research as was practicable and economical.

Agricultural research was carried out by two institutions in the province; the University Faculty of Agriculture in Pristina and the Biotechnical Institute with headquarters in Pec. The University Faculty was an autonomous organization with the status of a working organization. The Institute was one of the working organizations, which made up the Kombinat, AgroKosovo, but it was also organizationally linked with the Faculty.

The Faculty was responsible for both basic research and adaptive research (as well as under-graduate training) carried out by each of its four, basic constituent institutes:

- crop production
- animal health and husbandry;
- economics and development;
- orchards and grafting.

The Bio-technical Institute had six constituent institutes, each a basic organization (BOAL). Each institute had adaptive research and also development functions, mostly concerned with the supply of new breeding material but also covering services such as soil testing and data analysis.

<u>Institute</u>	<u>Location</u>	<u>Supplies</u>
Crop Production	Pec	Improved cereal and fodder crop varieties.
Orchards and Vineyards	Pec	New varieties of soft fruits and vines.
Fruit Tree Nursery	Pec	Planting material of stone and pome fruits.
Livestock and Veterinary	Pristina	A.I. and imported breeds especially cattle.
Fruit Estates and Plant Protection	Djacovica	-
Economic Development	Kosovo Polje	-

Neither the Faculty nor the Bio-technical Institute had land of its own and research was carried out on land belonging to either social sector cooperatives or individual farmers. The locations of this research were in three categories:

- macro-locations, each 4-5 ha in extent, at Prizren, Pec, Kosovo Polje and Gnjilane;
- mini-locations, each 1-2 ha in extent, at Pec and Kosovo Polje;

- micro-locations, each approximately ½ ha in extent, at 30 locations belonging to individual farmers scattered throughout the province.

Research was conducted in the macro- and mini-locations under the direct control of the scientists concerned, with the assistance of staff from the local cooperative. The 30 micro-locations were cultivated by the farmer under the supervision of the local cooperative agriculturist and only occasional visits were made by scientific staff. The farmer was usually provided with the basic inputs seed fertilizers etc., required.

Research themes included the following:

<u>Crop/Livestock Type</u>	<u>Subject</u>
Cereals: Maize wheat and barley	- Improved varieties.
Oilseeds: Rape and sunflower	- Improved varieties.
Fodder Crops: Lucerne, Red clover	- Improved varieties.
Silage maize and vetches	- Rotations.
Orchard Crops:	- Improved varieties.
	- Cultural practices.
Ruminants: Cattle and sheep	- Nutrition – protein levels, substitution of concentrates; use of poultry manure and abattoir by-products.
Pigs:	- Piglet anaemia.
Poultry:	- Nutrition – protein levels.

Research results were either transmitted directly to farmers in the form of new seed varieties or were published in the quarterly journal Biotechnic. Of 29 papers published in this journal in the last four issues, 21 were about basic, descriptive or experimental techniques and only 8 were on adaptive research, containing innovations likely to be of use to practical farmers. Of these eight, only two (wheat varieties and the control of grain beetles) were likely to be of use to small farmers in the Individual Sub-sector. This heavy bias towards basic research and the Social Sub-sector could not be reflected in the research programme as a whole. However, as the financing of adaptive research was by contract and such contracts had been most likely to come from the Social Sub-sector, the logical consequence was that scientists did concentrate on this area. Further constraints on the research system and its staff were:

- an overall lack of finance, leading to too few research plots located only in the more accessible areas;
- the absence of a clear and demanding market in the Individual Sub-sector for practical research results;
- inadequate links with the extension service.

Credit

Four main institutions were involved in the supply of credit to farmers in Kosovo :

- Kosovska Banka (BANKKOS);
- the basic banks;
- the farmers' association (Cooperatives);
- other banks.

Most of the farm credit was handled through the cooperative system by BANKKOS, the basic banks and the cooperatives, but a number of individual farmers received loans directly as individuals from other banks, e.g. the Ljubljanska Bank, for tractors and farm machinery etc. The cooperative system of farm credit worked as follows:

- the farmer indicated to his cooperative that he would like a loan for a particular purpose;
- he was then visited by his local agriculturist bringing the brief application form and together they filled this out, listing the purpose and amount of the loan, the farmer's assets of land, machines, livestock etc., and the size of his family. The farmer then got this signed by two fellow farmers or regular employees who were non-debtors, and members of the same cooperative who were prepared to guarantee his loan;
- the completed application form was forwarded to the cooperative where it was put before a three-man commission, members and officers of the cooperative for approval. Where necessary, before approval, the commission could visit the farmer to determine his reputation in the community, and his standard of farming, if this was not already known, and to check on his declared assets;
- on approval, the application was forwarded to the nearest branch of a basic bank which forwarded it to BANKKOS in Pristina;
- in Pristina the farmer's ability to repay was checked against basic models for different types of loans, e.g. tractors, mini-farms and various kinds of crop development programmes, before approval;
- approval was then signified to the cooperative via the basic bank, and the cooperative gave the go-ahead to the farmer, supplying the relevant goods in kind (loans rarely, if ever, included paid labour);
- the loan was followed-up by the cooperative commission, who could make one or more visits to the farmer, and by the local agriculturist;
- repayment was effected by a lien on the produce, which the farmer contracted to sell to the cooperative.

Loans could be of two kinds: short-term loans for inputs such as seeds, agro-chemicals and fertilizers, or long-term loans for capital equipment, buildings, livestock and long-term developments such as planting an orchard or vineyard. Short-term loans were for periods of up to one year and attracted semi-commercial interest rates which, because of different policies, could vary from commune to commune. Long-term loans, for periods of five to eight years, attracted interest of only 4-5%. There was also a system of quick credit that could be approved on the spot by the cooperative manager for short-term loans - e.g. for bags, twine, insecticides etc. Some farmers, especially those who were neither permanent nor temporary members of cooperatives, expressed a reluctance to take loans. This may be partly because of ancestral fears, **because credit was long used as an instrument of exploitation against peasant farmers, and partly because many communities had social norms discouraging debt.** In addition, many non-members feared debt because of the variation in crop prices to which they were subject without contracts, and many farmers - especially co-operants who were entitled to receive short-term loans - simply did not know that they had this right. For all these reasons, the majority of loans were restricted to associated farmers. There were few or no outstanding debts and default on repayment was not generally regarded as a potential problem. Apart from the restricted expansion of credit due to the above reasons, several further constraints appeared to apply to the system:

- because the farm models were prepared centrally, they tended to be stereotyped and consequently resources were expended without sufficient regard to those already existing on the farm. For example, a farmer could be issued with five improved cows on a five-cow dairy farm model, when he already had one or two acceptable animals in his possession;
- insufficient regard was paid to alternative ways of achieving the same goal, perhaps over a time scale which was more in tune with the farmer's potential to improve his management. For example, A.I. or a combination of A.I. and replacement could be used to upgrade a farmer's stock rather than the standardised supply of expensive animals;
- as in many credit schemes, those that were favoured tended to be the people least in need of support. Loans tended to go to those farmers who had the greatest contact with the cooperative system and the most impressive collateral to offer – the richer farmers. This was particularly true of the low-interest and long-term loans which well off farmers were naturally most keen to get. For these reasons, and because their repayment ability was undoubted, the same farmers could in fact receive more than one loan at once;
- also, loans could be used to save the expenditure of savings or overseas remissions so that these could be used for house-building or other non-agricultural purposes;
- in the last few years, cheap loans for tractor purchase, together with overseas remissions, had swelled the numbers of tractors in some areas to uneconomic proportions, this to such an extent that the main autumn ploughing could be completed in a matter of days and the major use of tractors was for light transport. Tractor loans absorbed relatively large amounts of money and were therefore cheap to administer and appear impressive in financial reports. Nevertheless, the use of credit for this purpose did restrict its expansion amongst the poorer sectors of the population.

Livestock Services

Artificial Insemination. There was a network of artificial insemination centres throughout the province with an average of one or two centres per commune. Centres could be associated with Animal Health clinics and/or milk collection centres and could or could not share a common

professional staff. Straws of frozen semen and the liquid nitrogen in which to preserve them were supplied by the Livestock and Veterinary Institute in Pristina each fortnight. In some communes small vehicles (Zastava 750) were provided to take the semen out to the farm (maximum 20 km radius) but in most cases farmers brought their oestrous animals into the centre. Conception rates were said to be good at about 70% but inseminations per inseminator were low at about 500 – 1,000 per inseminator per annum and the total number of inseminations had increased very little over the past three years. Charges varied between commune from Dinar 200 per insemination to nothing, depending on the degree of subsidisation. Pregnancy diagnoses were carried out on only a small proportion of the animals. Most communes were proposing to increase the number of A.I. Centres threefold.

Milk Recording was in its infancy, with two small schemes outside the project area at Gnjilane and Prizren. Each scheme recorded about 450 purebred and crossbred dairy cows owned by about 250 farmers. Two milk recorders working out of one of the small research-cum-service stations weighted and recorded morning and evening milking once monthly for the first three months of the lactation.

Animal Health Centres. As there was usually only one animal health centre in each commune, and some of these were not manned by professional staff, farmers could have to transport their animals long distances to obtain veterinary assistance. In general the animal health situation was kept under adequate control through the on-going programmes of prophylactic vaccination. The value of animals was increasing rapidly due to inflation and improved breeding programmes.

Other Services

Farm Management/Development. Only minor services were provided through the extension service. Land development services are limited to the social sub-sector. Assistance is given with orchard planting and development consequent upon receipt of loans. Irrigation works, water supply and maintenance are provided only through large irrigation schemes. Other land development, e.g. fencing and drainage etc., is rarely provided.

Input Supply

Cooperative Depots. Inputs were distributed to almost all farmers in the area through a network of depots owned and operated by the cooperative. These were scattered throughout the province in varying intensity as below:

Cooperative Depot by Commune

<u>Commune</u>	<u>Existing Depots</u>		<u>Proposed</u>	<u>Total</u>
	<u>Number</u>	<u>Per km²</u>		
Vitina	8	37	-	8
Vucitin	4	86	4	8
Glogovac	3	97	2	5
Decane	4	93	1	5
Dragas	2	217	2	4
Istok	3	151	3	6
Klina	16	25	-	16
Lipljan	8	52	1	9
Orohovac	7	57	-	7
Podujevo	11	58	-	11
Srbica	3	124	6	9
Siva Reka	<u>4</u>	<u>108</u>	<u>2</u>	<u>6</u>
<u>Total</u>	73	66	21	87

Seeds and Planting Material. High yielding maize and wheat varieties were imported to Kosovo from research institutions in other parts of Yugoslavia. They were then tested by one or other of the research institutes in the Province and the most promising varieties were distributed to farmers after multiplication on social sub-sector farms. It was possible to satisfy the total annual demand for wheat and maize seed through this system and this was, in fact, achieved for the autumn wheat planting in 1980 and almost 100% of all farmers used the new wheat varieties. Although varieties of maize suitable for all areas were available in the Province, the varieties suitable for higher altitudes were not yet being issued and about 80% of farmers were still using local unimproved varieties. Both improved and unimproved cereal seed varieties, together with oil seeds (e.g. rape and sunflower and legumes) were distributed to farmers through the cooperative depots.

Vegetable seeds were obtained from local sources, mostly other farmers, and planting material for orchard crops, stone fruits and vines, from the Biotechnical Institute.

The system of seed production, processing, testing and distribution appeared to be highly satisfactory. However, there were shortcomings arising from inadequacies in the adaptive research system for providing suitable staple cereals in all areas of the province, and for improving seed supplies of minor crops, particularly vegetables and pasture plants.

A new seed preparation and cleaning plant, capable of handling 20,000 tons, being erected by the working organization, Malisgan, at Klina, was expected to be fully operational in 1981. The plant would process cereal seeds, rape and beans, but not maize and sunflower, and was expected to supply all the needs of the Province for these seeds.

Fertilizers and Agro-Chemicals. Fertilizers and agro-chemicals were distributed through the cooperative depots in much the same way as seeds. The quantities used were very variable and, although the average consumption was lower than recommended, there were areas and crops for which fertilizer consumption was high. All fertilizers were supplied in 50 kg plastic bags. Deliveries were made straight to the depot "magazine", through the rail and road system from the factories, and tended to be irregular because storage space at the factories was said to be restricted and the bags were kept in the depot stores until required by farmers. The peak usage periods appeared to be at wheat planting in October/November and maize planting in May/June. Most fertilizer stores were old brick and tile buildings with earth floors, constructed just after the

Second World War, although some new concrete-floored “magazines” did exist. The fertilizer bags were usually roughly stacked, ten to fifteen bags high on the bare earth floor without dunnage, and wastage, due to broken bags and damp, was high. Farmers travelled up to 25 km by tractor, horse or ox-drawn transport to collect their supplies, and on market days quite lengthy queues could form. Some depots had restricted opening hours and there were serious shortfalls on demand in at least one area, which may be due to poor ordering plans or delivery failure. Plant protection chemicals, herbicides, veterinary medicines and other agro-chemicals were sold through cooperative retail outlets.

Machinery Supplies. Tractors, trailers, major implements and spares were supplied through the cooperatives in major commune centres. Locally built INT and Fiat tractors appeared to dominate the market. There has been a significant increase in the number of tractors sold in the early 1980s. The overall coverage per hectare was as high as 1 : 15 or 20 ha, enabling the major cultivations to be completed quite quickly. However, distribution was very variable, and some of the poorer more inaccessible villages may have only one or two tractors in the whole village. The many horse ploughs seen appeared to be due more to a poor use of tractors rather than a lack of them. Although farmers did share tractors with their relatives and neighbours, the village norms were against making a charge for it and farmers appeared to be reluctant to lend or hire new tractors. The major use of tractors was for light road transport and the transport of building materials. Wide usage was further restricted by a lack of suitable equipment. Many tractors were equipped with little more than a plough, and the majority of trailers had been adapted from horse-drawn vehicles.

Output Marketing

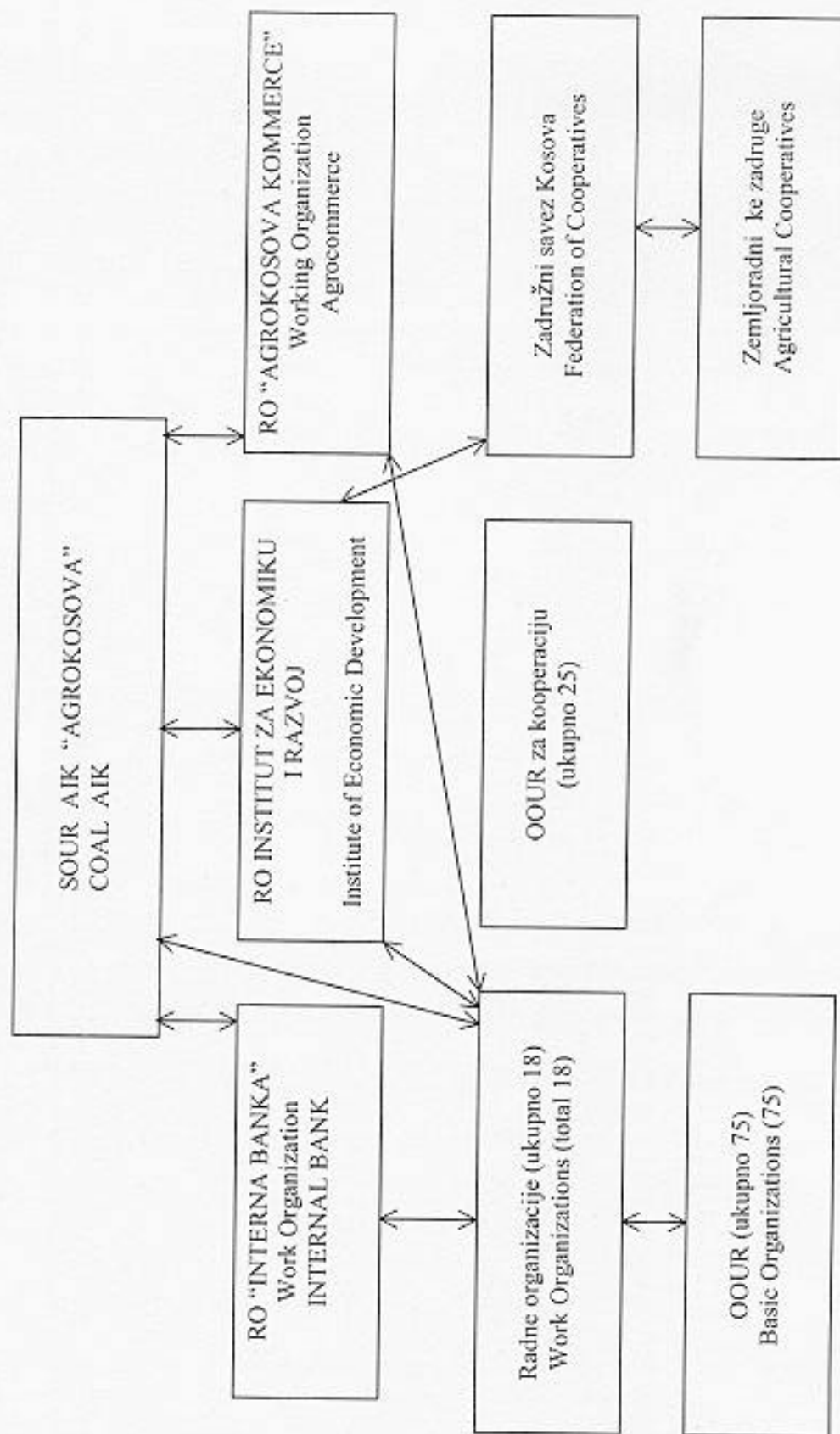
Two marketing systems existed in the province:

- (i) **The formal marketing system** which dealt with the bulk of food grains; arable industrial crops such as sugar beet, tobacco and oilseeds; grapes (for wine and juice making); some other industrial orchard crops - e.g. soft fruits for juice and major livestock products such as wool, milk and meat. The formal marketing system was operated through the farmers' cooperatives and through specialist marketing organisations such as the sugar beet factory in Pec and the tobacco factory. The farmers cooperatives only dealt formally with farmers who had produce to market. Farmers contracted with the cooperative to sell all or some of their produce, mostly food grains, at an agreed price before the season starts. The produce was brought by the farmer to collecting points – cooperative depots for non-perishables and either the factory or other points for perishables – it was weighed and perhaps graded by the cooperative, the farmers' account debited and he/she was paid after agreed deductions (loan repayments, cesses, operating costs etc.) had been made.
- (ii) **The informal marketing system** accounted for all products not covered by the formal system – most vegetables, including excess bulk vegetables not used for processing such as peppers and cabbage; grapes and fruits such as stone fruits, apples and pears for fresh consumption; nuts (walnut, chestnut and hazelnut), timber and wood for building poles and firewood, and livestock and livestock products such as skins (rarely hides) and cheese. Weekly markets were held in the major villages and commune centres and daily markets in Pristina and some other major towns. The communes provided an area near the town centre and some covered stalls for the fruit and vegetable market. The livestock market was often on the same site or was merely a field on the outskirts of the settlement. People and goods were transported by tractor, horse or ox-drawn vehicles and in the larger centres by bus. Livestock were transported either on foot or tied in carts or wagons. Farmers travelled up to 25 km to market and if they had produce to market, could attend two or three markets a week at the height of the season, crossing commune boundaries to do so.

Milk Collection. Most communes had one or more milk collection centres designed to collect and cool 2-3,000 litres of milk daily. Farmers brought their milk to the centre in cans, it was tested by loctometer, a sample taken to determine the percentage of butterfat, measured and then added to the insulated bulk tank for cooling and storage. From the milk collection centre it was collected once daily or every two days and taken to the milk processing factory in Kosovo Polje for processing. Farmers were paid monthly on the basis of the butterfat content of their milk. Prices varied according to the subsidies set by the commune but varied around Dinar 8 per litre.

Storage and Processing. Storage for grains was provided at the cooperative depots. It was generally in wooden bins or on the floor walled in by bags. After sale by the cooperative, it was stored in silos and warehouses operated by Zhitopromet, the work organization of AgroKosovo responsible for grain marketing. Cool stores for perishable fruit and potatoes were rare. Deliveries of fruit for processing were phased to fit in with the storage available at the factory. Processing was carried out in 14 factories by the nine organizations of the AgroKosovo.

Organigramme 1. Organization of AGROKOSOVA (In the Early 1980s)



**Kosova Agriculture and Agribusiness Sector Assessment
and
Development Program Recommendations**

Attachment C

Kosovo Damage Assessment in Agriculture, Livestock and Animal Health Services

Kosovo: Damage and Needs Assessment in Agriculture

Review of the Agricultural Sector – Kosovo

Rapid Food Economy Assessment of Kosovo Province

**Programme for Reconstruction of Rural Economy
and Associated Working Papers on:
Livestock & Animal Health Services (WP1)
Farm Mechanization (WP2)
Agro-Industrial Sector (WP3)
Irrigation (WP4)
Forestry (WP5)**

Damage Assessment 11 – 21 July – hard copy only

Damage and Needs Assessment in Agriculture – hard copy only

Review of the Agricultural Sector by Chabot – hard copy only

Rapid Food Economy Assessment of Kosovo Province
29th June - 14th July 1999

Mark Lawrence
The Food Economy Group

First Draft
15th July 1999

Introductory Note:

This report is presented in two parts. **Part I** contains an account of the findings of a rapid food economy assessment of Kosovo completed one month after the end of the NATO bombing campaign. Results from this assessment were combined with data collected by a separate FAO rapid crop assessment to develop, in conjunction with WFP programming staff in Kosovo, an analysis of food aid needs for Kosovo for the next 12 months (July 1999 - June 2000). This analysis and a set of explanatory notes are presented in **Part II** of the report.

Part I : Results of the Rapid Food Economy Assessment

1. Summary

1.1. A rapid food economy assessment of Kosovo was undertaken jointly by WFP and FAO between 29th June - 14th July 1999. The objectives were a) to develop an analysis of food aid needs for the period July 1999 to June 2000 and b) to explore ways in which food aid could promote the normalisation and reconstruction of the Kosovo economy.

1.2. The outputs from the exercise were a) a preliminary map of food economies (or livelihood zones) for Kosovo, b) a baseline analysis of sources of food and income for 1997, the year immediately preceding the current conflict, and c) a projection of likely sources and amounts of food and cash income for the next 12 months, taking into account the effects of conflict between March 1998 and July 1999.

1.3. Three main food economy areas were identified, covering the most densely populated central areas of the province. In all three areas the main sources of food and cash income during 1997 were agricultural and livestock production, supplemented by cash income remitted from immediate family members and relatives working abroad, primarily in Germany and Switzerland (roughly half of all rural families have at least one family member working abroad). In decreasing order of wealth, the three areas were the *Mediterranean* food economy area (growing green peppers, vegetables and, in the south, grapes), the *Eastern Plateau* (producing a surplus of beans and wheat) and the *Central Hills*, a very poor area of near-subsistence production.

1.4. Beginning in March 1998, Serbian military and paramilitary action in the north-west of the province has caused massive dislocation and destruction to the rural economy. This was intensified and spread to the south and east following the start of the NATO bombing campaign on

March 24th 1999. Besides the obvious displacement of the population, the burning and looting of houses and the killing of individual Albanians, the insecurity has had a number of effects on the rural economy.

1.5. Production of winter wheat (planted last October and harvested in June/July) in the most severely affected north-western municipalities will be 'insignificant' this year according to FAO. Production elsewhere will be either 'reduced' or 'near-normal' (in the least affected south-east of the province). The rural population has also almost completely lost this year's production of vegetables, maize, beans and potatoes, since the mass displacement during the NATO bombing campaign coincided with the season for planting these crops (March-April). This will have both nutritional and economic consequences next year, as these are important sources of nutrients, and the sale of vegetables and beans contributes significantly to rural incomes in normal years.

1.6. There has also been widespread looting and slaughter of livestock. Village reports (and often detailed records kept by the Mother Theresa Society, a national NGO) indicate that cattle holdings have been reduced to roughly 50% of 1997 levels, while the holdings of small stock and chickens now stand at roughly 25% of 1997 levels. A large proportion of household food stocks have also been destroyed or looted, or consumed during the conflict.

1.7. The loss of crop production this year and the looting and slaughter of livestock mean that rural incomes will be very much reduced over the next 12 months compared to 1997. Those families without significant crop production will obviously face the greatest difficulties, and the mission has concluded that, for these families, cash incomes will be low and similar across all three food economy areas next year. The implication is that geographical targeting of food aid by food economy area is not appropriate. Assistance should instead be geographically targeted according to crop production.

1.8. The trade in food items has restarted remarkably quickly in the four weeks since the end of the conflict. Sugar and oil were widely available at the time of the assessment, and wheat flour has also begun to reappear on the market. These commodities were of commercial origin (often imported opportunistically by Albanian traders) and there was no evidence of the sale of relief food items. Perhaps surprisingly, prices for basic foods were, at the time of the assessment, very similar to those reported for 1997, indicating the speed with which private trade has restarted and the relative competitiveness of the market.

1.9. Rural families without crop production can expect to obtain roughly 10% of food needs from their own livestock production next year, and between 10% and 30% of their needs from the market. The balance will need to be met through free food distributions. The proposal is that, for areas with insignificant crop production, 80% of rural food needs should be met through food aid for the 9 months from July-March, followed by 60% of needs for the following 3 months (April-June). This will allow a scaling down of free food distributions in the run-up to the next harvest. In those areas where a wheat harvest is being gathered, a lower proportion of food needs will have to be met through food aid.

1.8. A preliminary analysis of the costs of house reconstruction indicates that it is unrealistic to expect the costs of reconstruction to be covered out of current much reduced rural incomes. These

costs will instead have to be covered by an injection of international funds, from existing family cash savings or by substantial increases in remittance income. Food aid has little role to play in this process. While the distribution of food aid can release income to be spent on other items, the value of the basic WFP food basket is too low to contribute significantly to the costs of reconstruction. It should be noted that assistance with the rehabilitation of housing is everywhere a higher priority for the resident Kosovar Albanian population than food.

1.9. The mission also prepared a preliminary analysis for the urban areas. By 1997, few Kosovar Albanians were employed in the formal sector, following their expulsion from jobs in state controlled industries and the civil administration, beginning in 1990. By 1997, therefore, the urban Kosovar Albanian economy had come to depend very heavily upon the private trade and service sectors, fuelled by income from remittances. At this time the Mother Theresa Society was assisting approximately 30% of the urban Albanian population. In those towns that have suffered relatively little destruction, such as Pristina and Prizren, it is likely that this trade and service based economy will recover quite quickly, and that the 1997 pre-conflict situation will soon be re-established, i.e. it will soon be appropriate to begin targeting assistance only to those most in need, a number which can be estimated at approximately 30% of the population. The recovery of the urban economy is expected to take rather longer in the case of those towns that have suffered severe damage, such as Pec and Mitrovica, and here the % of the population in need of assistance is expected to remain relatively high throughout the winter.

1.10. The timeframe for even an initial recovery of the agricultural sector is at least one year. The speed with which the non-agricultural sectors of the economy recover will depend upon a number of factors, including investment decisions currently being taken by, among others, the major international donors. Trends within the Kosovar economy over the next 12 months are, at this stage, very difficult to predict. There will be a need for regular monitoring of the food security situation over the next 12 months, so as to check the many assumptions inherent in the current analysis and to adjust the level of food aid deliveries to reflect changing needs.

2. Introduction

2.1. In the four weeks following the entry of NATO forces into Kosovo, 640,000 Kosovar Albanian refugees have returned from the neighbouring countries of Albania, Macedonia and Montenegro, while 75,000 Serbs have left the province and sought refuge in Serbia. The Albanian returnees have joined the approximately 1 million people who remained within the province throughout the conflict, many of whom were internally displaced and have also recently returned home.

2.2. This assessment was mounted jointly by WFP and FAO to assist in the planning of food assistance to Kosovo for the period July 1999 to June 2000. The team liaised closely with a parallel FAO assessment team making a rapid assessment of crop production and emergency agricultural rehabilitation needs. The mission sought to combine four types of information:

1. Population, to determine the overall consumption requirement.
2. Crop production, to assess both food and cash income from this source.
3. Trade, primarily in wheat, to assess the potential for cereal marketing around the country,

and for commercial imports.

4. Household purchasing power, to assess the ability of households to access food in the market.

2.3. The assessment had two objectives, a) to develop an analysis of food aid needs for the 12 months beginning July 1999, and b) to explore ways in which food aid could promote the normalisation and reconstruction of the Kosovo economy, avoiding the potentially negative effects of free food distribution such as a depression of producer prices and an inhibition of trade.

3. Methodology

3.1. The mission used an approach known as household food economy analysis to assess food security and food aid needs. This type of analysis is undertaken in three stages, a) the preparation of a food economy map, delineating the major food economy areas or livelihood zones for Kosovo, b) the construction of a baseline analysis of sources of food and income, in this case for 1997, the year immediately preceding the current conflict, and c) an analysis of the impact of the recent conflict, allowing a projection to be made of likely sources and amounts of food and cash income for the next 12 months (July 1999 to June 2000).

3.2. Information was collected through a) two helicopter overflights allowing a visual assessment of the physical destruction of villages and towns, of agricultural activities and of livestock numbers, b) interviews with WFP staff and representatives of implementing partners, including the Mother Theresa Society (MTS), c) focussed group discussions with key informants in both rural and urban areas and d) reference to available secondary source material.

4. A Provisional Food Economy Map of Kosovo

4.1. Three main food economy areas were identified, covering the most densely populated central areas of the province (figure 1). In all three areas the main sources of food and cash income were agricultural and livestock production, supplemented by cash income remitted from immediate family members and relatives working abroad, primarily in Germany and Switzerland, see section 5 below²⁰.

4.2. The western, or *Mediterranean* food economy was the richest of the three areas before the current conflict. Warmer and better watered than elsewhere, this area was known for its production of green peppers and other vegetables, and for its vineyards in the south. The low returns to be obtained from growing wheat discouraged the planting of this crop, and the food economy was a net importer of cereals, even in a normal year.

4.3. With a lower cultivated area per household and with lower yields than further west, the *Central Hills* food economy was the poorest of the three areas before the current conflict. It was also a net importer of cereals in a normal year. Income remitted from western Europe and income

²⁰Kosovar Albanians live in extended families, typically encompassing three generations - father, sons and grandchildren - sharing the same house. The average family size in rural areas is 10, and 7 for the urban areas.

from seasonal labour migration to Croatia and Macedonia were especially important for this area, providing more than half of estimated average family cash income in 1997.

4.4. The *Eastern Plateau* food economy area was intermediate in terms of wealth between the other two areas. Lacking the water required for large scale vegetable production, families in this area produced instead a surplus of beans and wheat for sale. The low returns on these crops compared to vegetables account for the lower income per family compared to the *Mediterranean* food economy.

4.5. Livestock (cattle, chickens, and to a lesser extent sheep and goats) were kept in all three areas, and were an important source of food and cash income for a majority of families. Consumption of milk, home-prepared cheese and yogurt was high, and sales of these items, of live animals and of eggs contributed significantly to rural incomes.

4.6. The three food economy areas described above are bordered to the north, west and east by sparsely populated mountain areas whose populations depend primarily upon livestock production, and to the west by an area that has forestry as an important source of income. These areas were not visited during the current assessment.

5. Unemployment, Migration and the Urban Food Economy

5.1. Money remitted from relatives abroad has been an important source of income for Kosovo Albanians for many years. There have been two major waves of out-migration to western Europe. The first took place during the period 1968 to 1974, and was officially sanctioned by both the German and Swiss governments. Many family members have since joined these migrants, particularly since the start of the recent conflict in March 1998. This group of official migrants are said to remit on average DM 1,000 (\$500-600) per month to family members still resident in Kosovo.

5.2. A second wave of out-migration began in 1990, following the expulsion of most Kosovar Albanians from their jobs in state controlled industries and the civil administration. A total of 400,000 Kosovars (or roughly 20% of the population) are said to have left the province due to unemployment since 1990. Many of these migrants work illegally in Germany and Switzerland, typically undertaking low paid casual labour. They are said to remit an average DM 200-300 (\$100-150) per month.

5.3. Roughly half of all families in the rural areas have at least one family member working abroad, while the proportion of urban families receiving overseas remittance income is probably even higher.

5.4. The expulsion of most Kosovar Albanians from their jobs had an impact on all sectors of the economy, but particularly upon the more heavily industrialised urban centres of Pristina and Mitrovica in the east half of the province. The western towns of Peja, Djakova and Prizren are said to have been less affected, given that they had a stronger tradition of private trade and of small scale workshop activities (e.g. the goldsmith workshops in Prizren).

5.5. The net effect of the mass expulsion of Kosovar Albanians from formal employment was radically to transform the urban Kosovar Albanian economy into one that depended very heavily upon the trade and service sectors, fuelled by income from remittances.

6. Insecurity and its Impact on the Rural Food Economy, March 1998 - June 1999

6.1. Beginning in March 1998, Serbian military and paramilitary action in the north-west of the province has caused massive dislocation and destruction to the rural economy. This was intensified and spread to the south and east following the start of the NATO bombing campaign on March 24th 1999. Besides the obvious displacement of the population, the burning and looting of houses and the killing of individual Albanians, the insecurity has had a number of effects on the rural economy. Crop production has been reduced. Livestock have been slaughtered and stolen. Food stocks and cash savings have been depleted.

6.2. In terms of destruction of property and disruption to agriculture, the province can broadly be divided into three areas (figure 1). The most severely affected north-west quarter of the province has suffered insecurity since March 1998. Almost all villages within this zone have suffered serious destruction. The 1998 harvest (June-October) was disrupted in these areas, and the planting of winter wheat last October much reduced. According to FAO, the wheat harvest within these areas (June-July 1999) will be insignificant.

6.3. To the east and south of this area a second area can be discerned, within which the level of destruction and cultivation varies greatly from village to village. Many villages in this area were not severely affected by insecurity until after the start of the NATO bombing, other than in terms of hosting villagers displaced from elsewhere within the province. Overall, FAO's assessment is that wheat production in this area will be between 30% and 80% of normal.

6.4. Both the above areas have suffered widespread looting and slaughter of livestock. Village reports (and often detailed records kept by the MTS) indicate that cattle holdings have been reduced to roughly 50% of 1997 levels, while the holdings of small stock and chickens now stand at roughly 25% of 1997 levels.

6.5. Both areas have also almost completely lost this year's production of vegetables, maize, beans and potatoes, since the mass displacement during the NATO bombing coincided with the season for planting these crops (March-April). This will have both nutritional and economic consequences next year, as these are important sources of nutrients, and the sale of vegetables and beans contributes significantly to rural incomes in normal years.

6.6. The losses of maize and a further crop, alfalfa, will also have significant impacts on the livestock sector, as these are important fodder crops. Although there will be no absolute shortage of fodder over the next 12 months (there is plenty of hay, which is currently being cut), FAO has expressed concern over the quality of available fodder.

6.7. Of the areas visited by the assessment team (the three main food economies described here), only the southern part of the central plateau appears largely to have escaped destruction. FAO

expects wheat production to be near normal in this area. There has been some planting of maize and vegetables, although this tends to have been in the many Serbian villages in the zone.

7. Survival between March 24th and June 13th 1999

7.1. A number of coping strategies help explain the survival of the Kosovar Albanian population since March 1998. First of all, there is a tradition of accumulating substantial stocks of food and cash savings to cope with hard times. It is not unusual for families in the rural areas to have held a 6-month stock of food at the beginning of the crisis, while urban families will typically have had 6 or more weeks of food in store. Often these stocks had to be abandoned when the population were forced to leave, but villagers sheltering in the mountains also report having visited villages at night to collect food. In rural areas food stocks were frequently buried underground, and while some stocks were located and destroyed by the Serb army and paramilitaries, others were not. These remaining stocks are being consumed now, as the international food relief effort gets under way.

7.2. A second important factor has been the system of mutual support between even relatively distant relations within the Albanian community. This means that those displaced by conflict or otherwise facing problems of access to food have been able to access assistance from their kin. This was a particularly important strategy during the period of protracted insecurity preceding the NATO bombing, when the internally displaced depended heavily upon a combination of assistance from kin and relief provided by international organisations.

7.3. A third important strategy has been for rural households to switch from consuming wheat to consuming maize, a crop that is normally reserved for livestock. Other strategies have included the sale of livestock at an early stage in the crisis, and reductions in areas cultivated, both strategies designed to build up reserves of cash in hand.

7.4. While these strategies have been remarkably successful in maintaining access to food to date, stocks and savings have obviously been drawn down, particularly in recent months, and particularly in those areas that a) were relatively poor to begin with, and therefore less able to accumulate stocks and savings and b) have suffered the most destruction. The Drenica area (the northern half of the *Central Hills*) stands out in this respect, and should be a priority in terms of immediate distribution. The towns of Pec and Mitrovica, which have also experienced severe destruction, and where stocks are presumably lower than elsewhere, are also priority areas for distribution in the short term.

8. Income for Rural Families, July 1999 to June 2000

8.1. The loss of crop production this year and the looting and slaughter of livestock mean that rural incomes will be very much reduced over the next 12 months compared to 1997. Preliminary field data suggest that between 40% and 80% of rural cash income was derived from the sale of crops and livestock/livestock products in 1997, with the balance coming very largely from remittances. Income from the first two sources will be much reduced over the next 12 months, and the rural population will be very heavily reliant upon remittances from abroad.

8.2. Those families without significant crop production will obviously face the greatest difficulties, and the mission has prepared preliminary estimates of average cash income for such families for each of the three food economy areas. Data are presented for 1997, with a projection for 1999 (figure 2). ***The main conclusion is that, for families without significant crop production, cash incomes will be low and similar across all three food economy areas next year.*** The implication is that geographical targeting by food economy area is not appropriate. Assistance should instead be geographically targeted according to crop production.

9. Purchasing Power of Rural Families, July 1999 to June 2000

9.1. While incomes will decline, the need for expenditure, particularly on reconstruction, can rarely have been greater. House construction in the rural areas has for many years been a slow process, typically taking from 8-10 years and requiring an annual investment of perhaps DM 5,000-6,000 per year. (The presence of large numbers of houses under construction in the rural areas is no evidence of a rural housing boom before the current crisis - it is instead evidence of the slowness with which housing projects could be completed). If 5,000-6,000 DM can be taken as any kind of indicator of the cost of rehabilitating 1-2 rooms in a burnt-out house, it is clear that rural incomes will be insufficient to cover more than a small proportion of reconstruction costs. In other words it is unrealistic to expect the costs of reconstruction to be covered out of current income. These costs will instead have to be covered by an injection of international funds, from existing family cash savings or by substantial increases in remittance income. Food aid has little role to play in this process. While the distribution of food aid can release income to be spent on other items, the value of the basic WFP food basket is too low to contribute significantly to the costs of reconstruction.

9.2. There are two other categories of expenditure that rural families will need to cover over the next 12 months. These are the costs of restarting production, unless these are met at least partly by outside agencies (purchase of seeds, fuel for tractors, fertilizer etc.), and the costs of a number of essential non-food items, including electricity, clothes, soap, wood for winter heating and education. Preliminary estimates suggest that minimum expenditure on these items will amount to approximately 3,000 DM per family per year in the *Mediterranean* and *Eastern Plateau* food economies, and 2,500 DM per family per year in the *Central Hills* food economy, where smaller areas are cultivated and production costs are therefore lower.

9.3. Since projected incomes exceed these figures (figure 2), it is clear that there will be some limited capacity to purchase food in the market over the next 12 months, provided the costs of rebuilding are not to be covered out of current income.

9.4. The trade in food items has restarted remarkably quickly in the four weeks since the end of the conflict. Sugar and oil were widely available at the time of the assessment, and wheat flour has also begun to reappear on the market. These commodities were of commercial origin (often imported opportunistically by Albanian traders) and there was no evidence of the sale of relief food items. Perhaps surprisingly, prices for basic foods were, at the time of the assessment, very similar to those reported for 1997, indicating the speed with which private trade has restarted and the relative competitiveness of the market. Market enquiries and interviews with key informants suggest that, for a family of 10, the cost of a very basic basket of food items (wheat flour, sugar

and oil supplemented with limited amounts of potatoes and other vegetables) would have cost DM 2,500 per year in 1997. The conclusion is that, provided current prices levels can be maintained, rural households could purchase up to 30% of their food needs in the market over the next 12 months, but only by keeping expenditure on other non-food items to a bare minimum. This would have negative repercussions not only on their standard of living, but also for the recovery of those trading sectors that have in the past satisfied rural demand for basic consumer items.

9.5. The proposal is that rural families should meet 10% of their overall food needs from the market over the 9 months from July-March, followed by 30% of needs for the next 3 months (April-June). Ideally, these additional food purchases between April-June can be funded out of an increase in livestock income, as new calves are born in the spring and milk output increases.

10. Access to Food and Food Aid Needs of Rural Families, July 1999 to June 2000

10.1. Rural families normally consume food derived from three main sources, their own crop production, their own livestock production (milk, milk products and eggs) and the market. An overall picture of food sources for rural families in all three food economies is presented in figure 3²¹. Obviously, differences between the different food economies existed, but these tended to be small (greater consumption of own wheat production in the *Eastern Plateau* for example).

10.2. Rural families without crop production can expect to obtain between 5-15% of food needs from their own livestock production next year (i.e. half of that obtained from this source in 1997), and between 10% and 30% of their needs from the market (section 7). The proposal is that the balance be met through free food distributions (figure 3). In detail, ***The proposal is that, for areas with insignificant crop production, 80% of rural food needs should be met through food aid for the 9 months from July-March, followed by 60% of needs for the following 3 months (April-June).*** This will allow a scaling down of free food distributions in the run-up to the next harvest.

10.3. This proposal has been used to develop, in conjunction with WFP programming staff and FAO representatives in Pristina, an overall analysis of food aid needs and a preliminary distribution plan (see section 2 of this report).

11. Assumptions Underlying the Current Analysis : the Need for Monitoring

11.1. These projections of access to food and cash income for the next 12 months are based upon a number of assumptions, as follows:

- a) Food stocks should not be depleted further to cover current food consumption
- b) Any remaining cash savings or any increase in remittance income should be used to cover the costs of rebuilding rather than food purchases

²¹Based upon an average food requirement of 2,250 kcals per person per day for 10 months and 2,450 kcals per person per day for 2 of the winter months, as proposed in WFP EMOP no.???, July-December 1999.

- c) There will be no increase in off-farm employment compared to 1997
- d) Livestock income will decline in proportion to the decrease in livestock holdings (i.e. villagers will continue to sell the same proportion of milk production at similar prices as before the crisis, for example).
- e) Market prices for food and non-food items will remain similar to current levels, and similar to those prevailing in 1997.
- f) Farmers will have to cover a significant proportion of crop and livestock production costs from current income.

11.2. The mission believes that this represents to some extent a worst-case scenario. There is an obvious potential for employment on reconstruction, for example, and there may be some subsidisation of production costs through agricultural rehabilitation projects. But the impact of such activities is, at this stage, very difficult to predict. The conclusion is that the validity of the various assumptions will need to be monitored on a regular basis over the next 12 months, so as to update the projections in line with the developing situation in Kosovo.

12. The Urban Food Economy and Urban Food Aid Needs July 1999 to June 2000

12.1. In the absence of formal employment in industry and the civil administration, the urban Kosovar Albanian economy had, by 1997, come to depend very heavily upon the private trade and service sectors, fuelled by income from remittances. At this time the Mother Theresa Society was assisting approximately 30% of the urban Albanian population. In those towns that have suffered relatively little destruction, such as Pristina and Prizren, it is likely that this trade and service based economy will recover quite quickly, and that the 1997 pre-conflict situation will soon be re-established, i.e. it will soon be appropriate to begin targeting assistance only to those most in need, a number which can be estimated at approximately 30% of the population.

12.2. The recovery of the urban economy is expected to take rather longer in the case of those towns that have suffered severe damage, such as Pec and Mitrovica, and here the % of the population in need of assistance is expected to remain relatively high throughout the winter.

Part II : Analysis of Food Aid Needs for Kosovo, July 1999 - June 2000

1. Introduction

1.1. This analysis of food aid needs for Kosovo for the period July 1999 - June 2000 was developed in conjunction with WFP programming staff in Kosovo. It draws upon the results of two rapid assessments completed during the first half of July 1999, within one month of the end of the NATO bombing campaign and the beginning of the mass return of almost 700,000 refugees from Albania, Macedonia and Montenegro. These assessments were a) a rapid crop assessment undertaken by FAO and b) a rapid food economy assessment undertaken jointly by FAO and WFP.

1.2. The task of assessing food aid needs in the context of Kosovo is particularly difficult given the uncertainty over the speed with which the Kosovo economy can recover from the massive destruction wrought by the recent conflict, and from the many years of economic stagnation that preceded it. There are already signs of a rapid recovery in the trade and service sectors of the

least damaged towns such as Pristina and Prizren, but this should not be allowed to obscure the much more fundamental problem affecting much of the rural economy, which is the loss of a substantial proportion of one year's agricultural production and its associated income, plus a massive destruction of property, productive assets and livestock. The timeframe for even an initial recovery of the agricultural sector is at least one year.

1.3. During this first year, the recovery of the non-agricultural sectors of the economy depends primarily upon the decisions taken by a number of actors including the major donors, who may fund rehabilitation projects providing direct employment and a general stimulus to the urban and rural economies, and of private individuals, including many ex-patriate Kosovar Albanians who will be making their own personal investment decisions. It is still too early to know the results of these various deliberations. It is perhaps safe to conclude, however, that any general economic improvement will be relatively slow to take effect, and that food aid will have an important role, as the intervention of first resort, in providing direct support to the Kosovar population for at least the next six months, and probably longer. There is, however, clearly a need for on-going monitoring of the situation.

2. Objectives of Food Aid Provision to Kosovo

2.1. Needs cannot be assessed unless the objectives of food aid provision are specified. The mission and WFP programming staff in Kosovo take the view that food aid provided to Kosovo should, in addition to significantly reducing the risk of malnutrition, also provide a general economic stimulus and promote normalisation and reconstruction of the Kosovo economy. Linked to this objective is the proposal that, even at this early stage, the plan should be to begin phasing out food aid deliveries towards the end of the next 12 months, i.e. just prior to next year's harvest. The current analysis and distribution plan have been developed with the following objectives in mind:

1. To reduce the risk of hunger and malnutrition.
2. To prevent further depletion of food stocks and cash savings.
3. To replace lost crop and livestock production.
4. To improve living standards by reducing expenditure on staple food items and increasing expenditure on vegetables and/or non-food items, including clothing and wood for winter heating.
5. To promote recovery of the private trading sector, by increasing purchasing power and effective demand.

3. Explanatory Notes on the Attached Tables

3.1. The population for Kosovar is projected to be 1.7 million, once the immediate repatriation of refugees from Albania, Macedonia and Montenegro has been completed. For the purposes of the current analysis, this population has been divided into five groups, as indicated in table B.

3.2. The year has also been split up into three phases:

July-August. A blanket distribution is planned for first two months, to meet immediate food needs of the general population and to tide them over until normal food markets can be re-established to supply those with adequate purchasing power. While the proposal is to reach 100% of the population during this period, the expectation, given initial logistical and distribution constraints, is that 80% of the population will actually be reached within this period.

September-March. This can be termed the maintenance phase of the operation, during which food will be targeted geographically, according to two major factors, a) the extent of destruction in the major towns, and b) the level of crop production in the rural areas.

April-June. The first stage in phasing out assistance. The number of beneficiaries will be scaled down prior to the next harvest in June 2000.

3.3. The analysis has been built around a relatively small number of basic assumptions. The first assumption is that once the trade and service sectors of the urban economy have recovered, no more than 30% of the urban population will be in need (i.e. a return to the general situation prevailing in 1997). This is expected to occur quite rapidly in those towns suffering limited destruction, such as Pristina and Prizren, and more slowly in those towns suffering severe destruction, such as Pec and Mitrovica, where the number of beneficiaries can be expected to decline rather more slowly.

3.4. As far as the rural areas are concerned, the basic assumption is that at least 60% of families in areas expecting an insignificant harvest will require assistance throughout the 12 month period, but that the number of beneficiary families should be maintained at a higher level (80% of the population) at least until the end of the winter. This will have the effect of promoting increased expenditure on vegetables, clothing and wood for heating during the critical winter months. It should be noted that a proportion of the rural population requiring assistance are currently internally displaced in the main towns, due mainly to the destruction of their home villages. This poses a major potential problem for the future.

3.5. Stepwise reductions in the % of the rural population targeted for assistance are proposed for those rural areas expecting a) a reduced harvest, and b) a near normal harvest (table C).

A: Population projection for Kosovo province, 1999	
1991 Census	1,892,000
Natural growth to 1999, assuming a growth rate of 2.1% per annum	+ 342,000
Out-migration 1991-1999	- 400,000
Serb refugees	- 75,000
Humanitarian evacuation programme	- 59,000
Projected population for Kosovo province, 1999	1,700,000

B: Population breakdown for Kosovo province, 1999		
	No. of people	% of population
Urban population ^[1]	510,000	30%
Living in badly damaged towns	170,000	10%
Living in less damaged towns	340,000	20%
Rural population	1,190,000	70%
Expecting insignificant harvest	340,000	20%
Expecting reduced harvest	595,000	35%
Expecting near normal harvest	255,000	15%
Total	1,700,000	100%

^[1] Defined as towns of more than 5,000 inhabitants

C: Projected % of population in need of food aid, July 1999 - June 2000			
	% of the population in need		
	Jul-Aug	Sep-Mar	Apr-Jun
Urban population			
Living in badly damaged towns	80%	65%	30%
Living in less damaged towns	80%	30%	30%
Rural population			
Expecting insignificant harvest	80%	80%	60%
Expecting reduced harvest	80%	60%	40%
Expecting near normal harvest	80%	20%	0%
% total population in need	80%	53% ^[1]	35%

Total number of beneficiaries	1,360,000	900,000	595,000
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^[1] $(10\% \text{ of popn} \times 0.65) + (20\% \times 0.3) + (20\% \times 0.8) + (35\% \times 0.6) + (15\% \times 0.2)$

KOSOVO

Programme for Reconstruction of Rural Economy

Preliminary Proposal: July/August 1999

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KOSOVO

Programme for Reconstruction of the Rural Economy

Preliminary Proposals: July/August 1999

I. Introduction

The recent fighting which started in 1998 and intensified between March and June 1999 forced the departure of about 1.4 million people from their homes, or about 74% of the Kosovar population, estimated at 1.9 million, living in the province in 1998: in addition, some 400,000 Kosovars had earlier migrated abroad, which makes up a total original population of 2.3 million. In rural areas, where the safety situation was worst, the proportion of the population who had left their villages (including farmers) must have been even higher. At the time when the FAO/World Bank mission²² visited Kosovo between about 10 and 20 July 1999, about 90% of the 800,000 refugees to neighbouring countries and almost all 600,000 internally displaced persons had already returned to their homes²³, very often finding a spectacle of heavy destruction. In rural areas, where about 65% of the total population live, the war caused considerable damage to agriculture and related economic activities such as agro-industries, supply of inputs and services, irrigation infrastructure, etc.

This report makes a preliminary analysis of the damage in order to identify the basis of what could become a “Programme for Reconstruction of the Rural Economy in Kosovo”, the objectives of which would be to repair some of the damage affecting the sector while setting the foundations for a longer term, sustainable rural development: the areas covered in this report include agriculture and its related activities such as upstream and downstream services, agro-industries as well as forestry. However it does not encompass other rural activities such as health, education, rural roads, etc. which are taken care of by other programmes. In fact, as explained in more detail below, the constraints and needs of farmers and other economic actors involved upstream and downstream of agriculture are due not only to the direct, physical damage caused by the recent intense fighting (although this has been huge) but also to 10 years (1989-1998) of economic damage resulting from counter-productive agricultural policies, often described by Kosovars as “colonialist”, which progressively suffocated the rural economy of the province.

Indeed, to assess the current situation and propose remedies, one has to understand the events which have affected the rural economy over the past 20-30 years. These can be divided into three phases: (i) before 1989 when Kosovo experienced a progressive development of its rural economy: Kosovo was then an autonomous region which meant that its agricultural economy and services were managed by Kosovar people²⁴ in Pristina; (ii) the period between 1989 and 1998 during which Kosovo lost its status of autonomous region and affairs were directed from Belgrade.

²² Messrs Benoist Veillerette, mission leader (FAO Investment Centre); Lawrence Clarke, farm machinery (FAO, Chief, Agricultural Engineering Branch); Luc Dubreuil, forestry (FAO Investment Centre); Nick Buck, livestock production and animal health (consultant); Antony Zagni, irrigation (consultant); Ms. Vilma Horinkova, water management (consultant) and Mr. Crister Cronberg, agro-industries (consultant). The mission is particularly thankful to Messrs MacMillan and Lauwers (FAO Investment Centre) for their support and guidance. Messrs Severin Ködderitzsch and Ibrahim Hackaj from the World Bank participated full time in the mission.

²³ Source: Kosovo Humanitarian Update No5, 26 July 1999, UNHCR.

²⁴ Kosovar are inhabitants of Kosovo, regardless their origin, i.e. including Albanian-speaking, Serb-speaking and other ethnic groups.

During this period, the rural economy, in spite of a sort of “economic resistance” from the local population and the emergence of an active locally led private sector, experienced a progressive deterioration which was aggravated by the international embargo on Serbia, and; (iii) 1998-1999: the fighting, which was particularly intensive from March to June 1999 resulted in considerable physical losses and damage

Kosovo is inhabited with ethnic Albanians, Serbs and other minority peoples. In this report, the distinction is not made on ethnic grounds but between local Kosovars (regardless their ethnic origin) and the inhabitants of other parts of Serbia. The mission’s interpretation of the past changes and resulting current constraints is based principally upon discussions and meetings with Kosovars and upon published material of both Kosovar and Serbian origin. As there was no opportunity to exchange views with the authorities from Belgrade on the subject (and in particular on the policies implemented over the last decade), the analysis of the mission could not be influenced by that side. However, the mission’s intention was always to remain as objective and neutral as possible and any breach of this rule is involuntary and subject to correction.

In Part II of this report, the recent history of rural economy, drawing on both Kosovar and Serbian information sources, is summarised to permit a better understanding of the current bottlenecks and needs which are analysed in more detail, sector by sector, in Part III. Part IV sets out a number of considerations and a strategy on which the design of an eventual reconstruction programme might be based, as well as a general outline of such a programme. The most urgent activities are then described in more detail in Parts V and VI, preliminary management arrangements are proposed in part VII, while tentative cost estimates and mechanisms to recover a part of them are set out in Part VIII. Finally, outstanding issues and necessary follow-up actions are highlighted in Part IX.

A series of technical Working Papers (WPs) is attached to this report: WP1 on livestock and animal health services; WP2 on agricultural mechanisation; WP3 on the agro-industrial sector; WP 4 on irrigation, and WP5 on forestry and wood industries. These are preliminary papers which will be completed, revised and further detailed in September this year.

II. Recent Evolution of Rural Economy

Importance of the Rural Economy and Agriculture

In 1997, rural population was accounting for 65% of total population. 25% of the population was directly agriculture-dependent but if we include the upstream and downstream sub-sectors, the agricultural sector represents about 40% of the total population. In addition, the general economic crisis of the 1990’s (see below) further increased the role of agriculture as the major provider of employment as it constituted an opportunity for those unemployed in other sectors to make a living. The sector employed an estimated 252,000 people in 1997, which **represents 54% of the total labour force** (this includes a considerable number of part-time farmers). In addition, if we add up all services and businesses upstream and downstream of agriculture and forestry, **the rural economy probably employs as much as 60%-70% of the active population today.**

In 1995, the value of provincial agricultural production was equivalent to US\$ 213 million, i.e. about 30% of the total provincial product, estimated at US\$ 720 million by Kosovar sources²⁵.

²⁵ Most of the statistics and estimates for the period 1989 - 1998 are extracted from official statistical yearbooks and, when not available, from a key report prepared by Ri-Invest in September 1998 «Economic Activities and Democratic development of Kosova ». Ri-invest is an NGO which was created in 1996 in Pristina in order to undertake an assessment of economic activities in Kosovo and propose strategies for economic development. The mission acknowledges the lack of reliable official data during that period and that

Again, if we add up upstream and downstream sectors as well as forestry, the rural economy could represent about **50% of total provincial production**.

Out of a total Kosovo area of 1,089,000 ha (10,890 km²), 577,000 ha was agricultural land²⁶ (53% of total) and 430,000 ha (39% of total) is covered with forest. Out of the agricultural land, about 400,000 ha is cultivable, the remaining 178,000 being pastures. The bulk of the arable land (291,000 ha) is occupied by cereals: winter wheat and barley on 83,000 ha (29% of arable land) and maize on 99,000 ha (34%). Wheat and barley are used for human consumption but there has always been a deficit in these productions (filled by purchases from the rest of Serbia) and maize is mostly used for animal feeding. Fodder crops occupy 36,000 ha and vegetables 28,000 ha. In 1996, industrial crops were insignificant at about 6,000 ha. Meadows (87,000 ha) make the bulk of the non-arable cultivable land, whereas orchards have been planted on 12,000 ha and vineyards on 9,000 ha. Irrigation had been developed on about 76,000 ha mostly in the form of medium to large size schemes in the plains but only 10,500 were irrigated in 1998.

Animal production is very important as shown in the above figures on land use. Before the recent fighting, there were about 400,000 cattle (of which 220,000 milking cows), 400,000 sheep, 62,000 pigs, 27,000 goats and 4.5 million poultry. Livestock is one of the main sources of food security (milk and milk products), organic fertilisers and cash income: it is estimated that between 40% and 80% of rural cash income was generated from livestock production and remittances. Crop and livestock performance were very low by European standards. For instance wheat yields averaged 2.8 tons per ha, maize yields 3.0 tonnes per hectare and cows were not producing more than an average of 1,500 litres of milk per year. Most of the production was for self-consumption or sales of some surpluses on local markets (meat, milk, vegetables). To some extent production of fruits, grapes for wine and a share of vegetables were sold to large-scale processing enterprises before they started to deteriorate (see below).

Agriculture is mostly a private sector activity as about 95% of the land is owned by individual farmers, the remaining part being cultivated by the socially owned Agro-kombinat Agro-Kosovo. The average farm size is about 3 hectares, spread over a large number of parcels (between 5 to 10 on average). Part time farming has always been widespread as many of the rural households have been accustomed to have one of more family members employed in town or other off-farm activities while they keeping some land as a security and for family food supply: out of the 185,000 households living in rural areas, an estimated 82,000 are full-time farmers, 85,000 are engaged in part-time farming²⁷ and 18,000 are non-agricultural households.

Pre-1989 Situation

A comprehensive working paper has been prepared by the FAO Investment Centre on the agricultural institutions and services in the early 1980s²⁸ (WP 6) and hence this main report will be very brief on this topic. In summary, the 1970s and 1980s corresponded to a period of progressive agricultural development. The performance of the agricultural sector gradually

alternative estimates, such as those produced by Ri-Invest could not be crosschecked. However, the mission is very grateful to Ri-Invest and in particular to Mr. Halim Gjergjizi, agricultural economist, who assisted it throughout its work.

²⁶ Statistics are for 1996 and extracted from the Federal Republic of Yugoslav Yearbook, 1996.

²⁷ However, most of the off-farm workers previously employed in the social or State sectors have lost their job during the 1990s increasing the role of agriculture as provider of employment (see above).

²⁸ Kosovo: Agricultural Institutions and Services in the Early 1980's, Working paper prepared by Mr. Marc Bral, Chief TCIE, FAO, in July 1999.

improved during that period and, over 20 years, yields increased by 50% to 100% from very low levels. Agricultural output was increasing by an average of 5% per year.

This increase was the result of important investments in the agricultural sector, in part supported by World Bank-financed projects: (i) a sharp increase in the use of inputs such as chemical fertilisers (a peak of 170,000 tonnes used in 1985-1986) and improved seeds, both of which were used by almost 100% of the private small farms by the end of that period; (ii) the rapid development of agricultural mechanisation (e.g., the number of tractors increased from 7,000 in 1975 to 35,000 in 1989); (iii) the development of irrigation facilities on about 76,000 ha (including the two major schemes of Ibar-Lepenik (19,900 ha) and Radonic (10,250 ha), rehabilitated during the 1980s by a WB-supported project) of which about 56,000 ha were actually irrigated in 1990; and (iv) the development of institutions and services including agricultural cooperatives, veterinary services, artificial insemination, extension services, the University Faculty of Agriculture, etc. At that time, although only cultivating about 10% of the land, the Agro-kombinat was still playing a key role in running the agro-processing enterprises (and therefore purchasing marketable surpluses from farmers), supplying a large share of the farm inputs and employing most of the agricultural technicians.

Nevertheless, and despite this encouraging progress, at the end of the 1980s, the performance of agriculture in Kosovo had not reached its full potential and remained at a relatively lower level compared with European standards. For instance the milk yield of cows increased from 1,000 litres per cow per year in the 1970s to 1,500 litres in the late 1980s and wheat and maize yields did not exceed 3-4 tonnes per hectare.

Ten Years of Economic Damage on the Rural Economy (1989-1998)²⁹

In 1989, Kosovo's status of an autonomous province within the Republic of Serbia was removed. In economic terms and in particular for the rural economy, this had very significant implications. It immediately led to the application of rural economic policies which are portrayed by Kosovar sources as counterproductive, neglectful, repressive and « colonialist », inflicting considerable damage on agriculture and related sectors in rural areas. This period was characterised by the following features:

- (i) Decision making was transferred from Pristina to Belgrade and Kosovar people considered themselves as living within what had effectively become a colony of Serbia. In economic terms, the apparent objective of Belgrade was to take advantage of Kosovo which was considered an important source of foreign currency (through remittances estimated at between 450 and 600 million DM per year) for Serbia which was suffering from the international embargo. One strategy was to channel part of this foreign exchange into the Serbian economy by selling products of Serbian origin (in particular agricultural goods) to the province and by imposing heavy taxes and unofficial levies on local enterprises and businesses.
- (ii) In agriculture, this took the form of a policy of selling as many food products as possible from Serbia as a main means to harness foreign exchange. Progressively a larger share of cereals, potato, animal products (milk, eggs, and meat), juices, processed fruits and vegetables was « imported » from Serbia. It is estimated that

²⁹ Again, the mission acknowledges that the interpretation of the events of these ten years of economic and ethnic tension which resulted in the recent war, is based on local Kosovar sources. The previous administration had largely left the province and it was not possible to incorporate their viewpoint.

Serbian food product sales in Kosovo reached about 400 million DM annually. This was partly achieved at the expense of local foodstuffs which were considered as competing with supplies from Serbia. Kosovar agricultural production and processing were thus discouraged by what was perceived as a deliberately counterproductive trade policy.

- (iii) This was achieved through a general abandonment of infrastructure and running down of services related to food, agriculture and agro-industry. The list is long and analysed in more detail in Part III of this report, sector by sector. In brief, the neglect and boycotts concerned all types of food and wood processing; the provision and supply of all kinds of inputs for agriculture; the almost total lack of maintenance of the major irrigation schemes; the dismantlement or poor management of veterinary services, extension services, agricultural education and research, etc.
- (iv) It goes without saying that almost no productive public investment in the rural economy was financed during this period (as opposed to private investment, as explained below).
- (v) There were also cases of over-exploitation (close to mining) of some resources such as forests from which logs were transported to Serbia.
- (vi) To achieve this policy, it was necessary to remove nearly all local Kosovar employees (mostly ethnic Albanians) from key managerial and technical positions in the local administration and social sector enterprises. It is estimated that about 145,000 workers (or 70% of the total formerly employed) lost their positions in or around 1990. They were only partially replaced by local Serbs or Serb refugees originating from other republics of the former Yugoslavia as a result of the wars in Croatia and Bosnia and Herzegovina.
- (vii) As a consequence of this sudden increase in unemployment and also of the depressed economy, Kosovo experienced a sharp increase of migration to neighbouring and European countries in search of job opportunities. This “brain drain” has led to a risk of a shortage of qualified technical and managerial staff in the province. On the other hand, the wave of emigration allowed overseas workers to send remittances which helped the local population to survive in this difficult period and invest in private enterprises.

This policy had devastating effects on the rural economy, including: (i) very little investment in farm machinery which led to an aging fleet and reduction of the numbers (e.g. from 34,948 tractors in 1989 to 31,726 much older ones in 1995); (ii) a progressive collapse of the formal channels of input supply through the cooperative system which had been set up in the 1980s with the support of a WB-financed project; (iii) almost no maintenance and bad management of the irrigation schemes which led to a reduction in the irrigated area from about 56,000 ha in 1990 to about 10,500 ha in 1998; (iv) a sharp deterioration in veterinary services; (v) a disruption of the milk collection system which affected most small farmers; (vi) an important reduction of the activities of the major State-own agro-processing enterprises; (vii) an over-cutting of wood resources with logs being transported to other parts of FRY and local socially-own wood processing factories partially closing up, etc.

While Kosovo was already amongst the poorest regions in Europe at the end of the 1989, the drastic reduction of economic activities in the province during the next period worsened the situation. Re-Invest estimates that the provincial product per capita dropped from US\$ 700 in 1989 to US\$ 340 in 1995. This by definition does not include remittances and might also underestimate the real level of production as some of the private activity in the «grey » sector could not be accounted for. In any case, this brings Kosovo to what appears to have become the poorest area in the Balkans (and in Europe): the comparable GNP per capita was US\$ 380 in Albania, US\$ 820 in FYR of Macedonia and US\$ 1,500 in the rest of Yugoslavia, the highest being US\$ 7,040 in Slovenia, or about 20 times the level in Kosovo!

Interestingly, however, one of the consequences of the 1990's crisis was an increase of active population engaged in agriculture from about 136,600 in 1991 to 252,000 in 1997. This was mainly due to the fact that many employees lost their jobs at the beginning of the decade and some of them had no opportunity but to return to part-time farming as the only means of ensuring their food security. Due to the sharp increase of unemployment during that period (decrease of employed labour force from 592,000 in 1991 to 469,000 in 1997) the share of agriculture in generating employment increased from 23% to 54% during the same period.

The Simultaneous Emergence of an Active Private "Parallel" System (1989-1998)

The emergence of private entrepreneurship is the other side of the coin – a spontaneous response of the Kosovar people to the repressive Federal Government economic policies. In 1989, in Yugoslavia, it became legally possible to create private enterprises. The pace at which such enterprises were set up was immediately impressive in Kosovo: from none in 1989, the number of registered enterprises increased to 5,000 in 1991, 10,000 in 1992 and 15,000 in 1993 before reaching a peak of more than 16,000 between 1994 and 1996. Then, their number diminished rapidly to reach about 5,500 at the beginning of 1999 as a result of a repressive policy which began to intensify in 1996. Most of these enterprises were of small size (1 to 5 workers) and only 5% of them employed more than 10 workers. Simultaneously, the number of privately owned shops exploded to reach a maximum of about 19,000 registered ones in 1996. As a consequence, the share of the private sector in total GDP rose to about 50% at the end of 1995. It has also been estimated that the private sector (including both enterprises and shops) employed between 70 and 80,000 persons at the peak period.

This development of private businesses and services was made possible by a combination of the following factors:

- (i) farmers badly needed a minimum level of most basic services (input supply, repair services, marketing of their products, etc.) which became virtually unavailable from formal channels. There was a vacuum which was filled by private investors;
- (ii) Most Kosovar managers and technical staff were expelled from their previous State work units and some of them took this opportunity to create their own business in the same sector in order to survive while continuing to use their skills;
- (iii) as a result of the generalised unemployment and economic depression, emigration rapidly increased during this period as well as the level of remittances. It is estimated that about 400,000 people migrated of whom possibly 300,000 were workers who were remitting an estimated 450-600 million DM per year. It has been shown that these remittances were by far the main source of private investment during the period in which entrepreneurs were denied access to the formal banking system;
- (iv) these enterprises were tacitly accepted by the Serbian regime because they were a source of both official and non-official income for Government entities and staff through taxation and corruption respectively.

However, **the private sector operated under very difficult and constraining conditions** due to the repressive policy of the Government, the need to bribe authorities, the difficulties imposed on imports and exports, the consequence of the embargo on Serbia, the competition with Serbian enterprises which were sometimes subsidised by the Serbian government at the expense of Kosovar enterprises, the absence of access to the banking system and the general degradation of the economy of the province. Therefore, the scope of these enterprises was limited despite the entrepreneurial spirit of most Kosovars. In addition, most of them suffered damage and forced closure during the recent war. However, now that most of the previously mentioned constraints are being alleviated, the scope for recovery and further development of these enterprises appears very good, provided they can have access to the appropriate financial and technical services.

In the rural economy and agriculture in particular, small-scale private enterprises became particularly active in primary commercial production, marketing of agricultural production (when possible), trading of seeds, fertilisers, agro-chemicals and farm machinery, veterinary services, repair services for farm machinery, small-scale primary processing of agricultural products,

primary and final wood processing, etc. The recent development of these sub-sectors is analysed in more detail in Part III below.

This dynamic development of the private sector in agriculture is clearly illustrated by statistics which show a significant shift in the ownership structure between private ownership (PO) and social ownership (SO) between 1990 and 1997 (see Table 2). While the SO still represented 17% of agriculture in 1990, it only accounts to 4% in 1996. This is also illustrated by the degradation of social sector agricultural assets (orchards, vineyards, etc.). It should be noted that in 1996 the agricultural sector was the sector with by far the highest proportion of private ownership. The 1990s also saw the rapid development of private trade, with the share of PO increasing from 27% in 1990 to 67% in 1996. The share of PO in industry was still limited to 13% of the total in 1996 (compared to 1% in 1990) which illustrates that private industries are of smaller sizes: unfortunately few data are available which are specific to the agro-industry sub-sector.

Simultaneously, as part of the "economic resistance efforts", the Faculty of Agriculture and other education structures for ethnic Albanians were maintained, although with little means and reduced salaries paid to the professors and other employees (altogether 62 persons today including 50 doctors and professors). This was possible thanks to the so-called « parallel budget » to which resources were channelled from « voluntary » contributions from all ethnic Albanians: a fixed tax per household (8 DM per month in 1998, 10DM in 1999); taxes on private enterprises (about 100-200 DM per month) and 3% of earnings of Kosovars who had migrated abroad.

Damage Caused by the Recent War (until June 1999)

Out of a total population of about 1.9 million³⁰ living in Kosovo, about 1.4 million (or 74%) had to leave their homes especially between March and June 1999 and either took refuge in neighbouring countries/regions (Albania, FYR of Macedonia and Montenegro) or escaped to hilly or mountainous areas. The immense majority of rural population had to leave their villages, houses, land and business. During their absence, many homes and farm buildings were destroyed or damaged. Very often their stocks of grain and/or seeds were either stolen or burnt. In most cases, the animals were released to wander wild and were often stolen, sometimes slaughtered (for eating or distraction). A minority of them have been recovered by their previous owners or other farmers after straying for several weeks in the surroundings of the villages. Eyewitnesses from throughout the province have described a very well organised and systematic looting of farm animals which were reportedly gathered by military forces and transported in trucks to other parts of Serbia.

With regard to **agricultural machinery**, in some cases (possibly the majority), farmers were able to escape with their tractors either to find a refuge outside the province or in the forests or hills within the province. However, a substantial share of farm machinery was lost because: (i) some farmers were forced to leave their equipment behind which was then stolen for the most valuable pieces or destroyed (or even booby trapped); (ii) on the road, some were stopped and their machinery either confiscated or destroyed; (iii) finally some of the old tractors suffered from the long journey and had to be abandoned or finished the trip in bad shape.

In addition, **private processing enterprises** (small cereal and oilseed mills, slaughter-houses, small dairies, sawmills, etc.) were in some places particularly targeted for destruction. Some of

³⁰ Estimates by Ri-Invest (Institute for Development Researches, Pristina) for 1997 show a total population of 2.3 million, including about 400,000 having migrated abroad. No reliable recent official data exist as the 1991 census was boycotted by a large share of the population.

irrigation structures and pumps were vandalised (about 30% of them) but the main infrastructure could not be damaged (dams, main canals). Several veterinary stations were burnt out, others partly damaged. Private businesses including shops and dealers of farm inputs and equipment, repair services, etc. were also often been targeted. The **forest** has to some extent been directly damaged by war activities taking place in those areas and/or by bombing. In addition, a large share of the equipment used to manage and exploit the forest (vehicles, tractors, chainsaws, etc.) was looted or, if of insufficient value, destroyed.

The **extent of land mines** on agricultural land and forests is unknown. More than the presence of mines itself in some areas (which might be limited), the main problem is the fear of mines which prevents access to some economically important sites such as irrigation canals and structures or access roads to valuable forests. The risk is real and priority needs to be given to mine identification and clearance in these areas so that repair works can be undertaken.

At this point, it is not yet possible to make an accurate valuation of all aspects of the damage which has taken place for the following reasons: (i) quantification is not yet complete as a specific field survey is now being undertaken (see below); (ii) some of the equipment, buildings and infrastructure destroyed were old and their residual value limited, but their necessary replacement would certainly be much more costly: hence a choice should be made on which value to consider (i.e. residual value or replacement cost), and; (iii) as mentioned above, during the 1990s a number of private businesses emerged of which a share was not officially registered so that it is now difficult to evaluate the extent of damages to them. However, it is certain, even at this stage of the assessment, that the value of the destroyed assets would be counted in hundreds of millions of US\$ and that their replacement costs could exceed US\$ 500 million.

A **comprehensive survey of war damage to agriculture** is being undertaken under the guidance of FAO and the World Bank. It started on 24 July 1999 in order to assess with more precision the extent of damage, in particular that related to the losses of animals and farm machinery and deterioration of farm buildings. In the absence of reliable data³¹, this survey was considered necessary to quantify the main damage as well as to identify the main areas which will need special assistance in the near future. Indeed, we already know that the extent of the damage is uneven, most damage having occurred in the central and western parts of Kosovo. The survey is being carried out by a team of Albanian and Kosovar experts led by an Albanian NGO, CO-Plan, Centre for Habitat Development, specialised in this type of exercise. Two questionnaires (one at village level and one at farm level) were developed and pre-tested by the FAO/WB mission and will be used by a team of 16 enumerators and 4 experts to survey about 160 villages and interview about 1,600 households. These samples of villages and households (about 2% of total) will be selected by applying a statistically sound methodology in compliance with FAO guidelines in order to maximise the representativeness of the sample. The description of the methodology as well as the results and their analysis will be available by mid-September 1999. This survey will be complemented by a rapid assessment of the current situation of private enterprises engaged in agro-processing, agricultural marketing and providing farm machinery services undertaken by local counterparts³². However, at this point, the damage can already be assessed in qualitative terms and described with the aim of defining a strategy for future reconstruction of the agricultural sector. A description is given below by sub-sector of the rural economy.

³¹ Some partial estimates are proposed from different sources and sometimes contradict each other. This survey will be more comprehensive, systematic and scientific.

³² Results from another survey financed by USAid on socio-economic parameters of the damages and needs for reconstruction should be available by early September 1999.

III. Current Status and Constraints to Recovery of the Damaged Rural Economy³³

This part intends to recapitulate, sub-sector by sub-sector, the present situation of the rural economy as a result of these 10 years of deterioration and recent months of physical destruction and disruption. The purpose is to identify the main constraints to recovery of the sector.

Rural Houses and Infrastructure

Destruction of houses is the most spectacular sign of war activities in the rural areas. According to the latest estimates issued on 28 July by the EC-WB task force and based on a comprehensive assessment over the province undertaken by IMG³⁴, out of a stock of approximately 250,000 dwellings, about 120,000 (48%) were damaged. Of these, 78,000 (31% of the total) require complete or almost complete rebuilding. This damage is valued at about US\$ 1.1 billion. By extrapolation it is estimated that the damage to farm buildings (animal shelters and buildings for farm machinery) is of the same order (50% with damage, 30% total destruction).

Damages to local infrastructure (school health centres, water distribution networks) have roughly been estimated at US\$ 40 million. In addition, losses in terms of productive infrastructure have been valued at US\$ 300 million. This mostly includes damages to rural industry and services discussed below.

Annual Crops

The 1999 cropping season is largely lost. Depending on the estimates, only between 40% and 60% of the areas usually devoted to wheat has actually been sown during Autumn 1998. In addition, the percentage of area planted to maize compared with normal conditions is much lower, since the sowing time coincided with the beginning of intensive fighting in the province. Furthermore, it is estimated that only about 50-60% of the wheat area and a negligible area of maize will be harvested in 1999, due to several factors: (i) the fear of mines; (ii) the lack of maintenance and crop protection during 3 months, which will have resulted in important weed problems and little expected yield; (iii) some crops having been eaten by wandering animals; and (iv) the lack of spare parts for combines, and in some areas a shortage of harvesting equipment. As a result, the forecast for 1999 is around 110,000 tonnes of wheat, compared with 233,000 tonnes in 1998 and 328,000 tonnes in 1997, and compared with an estimated consumption of about 550,000 tonnes per year. The harvest of maize will be negligible. Furthermore, stocks of cereals traders and of individual households have largely been looted.

This means that a large amount of food aid is urgently needed. Needs are being covered by WFP in liaison with ECHO and the US Government, and in collaboration with a number of NGOs and the Mother Theresa Society³⁵ network, which are active at village level to ensure the logistics of equitable distribution of food aid. The plan is to cover 80% of all needs until end of September 1999, and then to progressively reduce the aid, which would also be more targeted to needy areas and population. It would cover 53% of the needs (ranging from 20% to 80% of consumption needs depending on the estimate of local damages) from September 1999 to April 2000, and 35% (from 0% to 60%) thereafter. Aid would subsequently be phased out of the province on the basis of

³³ More details can be found in working papers.

³⁴ International Management Group, an NGO specialised in damage assessment commissioned by the EC for this purpose, and which was also very active in Bosnia and Herzegovina.

³⁵ See more details on the Mother Theresa Society (MTS) in the section on targeting, part VII.

recovery of local production and capacity to import on a commercial basis³⁶. The size of the budget (more than US\$ 230 million) for this intervention underlines the need to rebuild the production base as soon as possible³⁷.

The first priority is to restart annual farm operations by making available to farmers farm inputs such as seeds, fertilisers, spare parts and chemicals, stocks of which were looted and which are often not affordable to a category of farmers. This type of intervention is covered by FAO/TCOR (relief operations), which is appealing for donors contributions to cover these needs, estimated at US\$ 22 million. At the same time, FAO/TCOR is trying to coordinate the involvement of a number of NGOs in agricultural relief interventions. Two staff are now based in Pristina, and a few donors (such as the Dutch Government and the WB) have already pledged to cover a limited part of these needs. However, whereas the need for seeds seems to be met by these donors and NGOs, the need for fertilisers is still largely unmet, since it looks less attractive to donors. Also, it should be noted that this type of emergency assistance is conceded on an exceptional basis, and that as soon as next year (autumn) most of the needs should be met through commercial purchases because: (i) the donors will be less generous; (ii) the focus will be switched to longer term and more sustainable reconstruction and re-investment programmes; and (iii) the private sector active in supplying inputs to farmers should not face disrupting competition.

Perennial Crops

³⁶ The need estimates were jointly undertaken by FAO and WFP. See report on Rapid Food Economy Assessment of Kosovo Province, 15 July 1999, by Mark Lawrence.

³⁷ "...as we feed the people, we must revive the agricultural sector..." Joly Dixon, head of the economic pillar of UNMIK.

In 1992, there were about 12,000 ha of orchards in Kosovo, 12% in the public sector and 88% in the private one. In addition, 9,000 ha were vineyards for wine production, 40% in the public sector and 60% in the private sector. The bulk of the production from these lands was allocated to big refrigerators, juice plants or wineries belonging to the Agro-Kosovo, mostly located in the South-west part of Kosovo (Gjakova, Prizren, Suhareka and Rahoveci municipalities). During the 1990s these perennial crops were poorly maintained and deteriorated rapidly; about 40% of them has already been removed. Although official statistics claim that the above-mentioned area of 21,000 ha of perennial crops remained unchanged, the faculty of agriculture believes that the area is greatly overestimated. The decline is mostly due to a drop in the activities of the agro-processing, resulting in much lower purchases from farmers at low prices, and consequently in a lack of interest in the crops. The situation seems worse for fruit trees than for vines, since farmers, in their majority, were still producing home-made wine and brandy during that period.

From 1998 the situation deteriorated due to the insecurity in the countryside. Pruning of trees and vines was hardly done, and the current condition of the plants looks poor, especially in vineyards which require relatively intensive husbandry which could not be provided during the past year. This is particularly the case in public sector orchards and vineyards, which have been virtually abandoned. It seems urgent that a systematic treatment of orchards and vineyards be organised before the winter, in order to save some of them and avoid the further development of diseases. It also appears also very important to privatise public land. Although it represents only a small proportion of the total, it is amongst the best for these types of production, and this would help to restore proper management of this valuable asset. At the same time, a more detailed assessment of the conditions of these crops should be undertaken to determine which crops could be recovered and which should be removed and possibly replanted.

Livestock Production (see WP1 for details)

Animals constitute the core of production systems of most private farmers. Almost all of them were keeping cattle (on average 1-2 milking cows per farm plus small animals and sometimes bulls). Some, in addition, had sheep (5-7% of them), goats, pigs, horses and chicken. Keeping cattle is important because this is one of the main source of: (i) food security for the household, especially children, which was almost entirely self-consuming the milk either fresh or processed; (ii) animal manure to maintain some level of fertility of arable land which was necessary in particular during the 1990s when the supply of chemical fertilisers became difficult; (iii) a source of cash in case of need by selling off-spring or old animals or sometimes some milk surpluses. Together with remittances, the sale of animal products represented between 40% and 80% of rural cash incomes. During the 1990s, horses were also of importance for the poorest as a source of draught power when the use of tractors was become less affordable.

By the late 1980s, there were about 400,000 cattle, 400,000 sheep, 62,000 pigs, 27,000 goats and 4.5 million poultry in the province. Their productivity was relatively low; for instance, average milk yields were not more than 1,500 litres per year and per cow and the body weight of animals was relatively low compared with animals of the same breeds in other areas or countries. AI was practised on a limited scale. During the 90s, the number of animals and level of productivity remained unchanged according to official statistics. Indeed, livestock was kept as a priority asset by most small private farms despite economic difficulties. However, according to some Kosovar specialists, the actual number had already decreased, in part due to abuse of some authorities which were ordering large scale slaughtering of animals for sanitary reasons without any scientific ground (e.g. some 5-10,000 sheep are reported to have been killed in 1995 without any serious

analysis). This could not be verified. The losses as a result of the recent war are likely to be enormous although uneven. They will be known in September. Some villages have been almost emptied of their animals.

Veterinary services were provided by 28 municipality veterinary stations, from which most of the ethnic Albanian staff were removed during the 90s. The level of services decreased sharply from this official channel which was entirely neglected. At the same time, some of the previously mentioned veterinarians managed to provide basic services to farmers often by charging small fees. Nevertheless, the situation of animal health deteriorated during that period due to lack of health care and vaccination campaigns such as anthrax and clostridia with ruminants. Some of these diseases (Q fever, brucellosis) are cause of sickness humans.

The current situation of the livestock sub-sector is depressed and fragile. Many animals have been lost and some veterinary facilities have been vindictively destroyed or systematically looted. The remaining animals will go through winter fed with mostly poor quality animal feed (as fodder could only be harvested very late) and their health conditions should be carefully monitored in order to avoid the spreading of diseases after this period of disruption.

Farm Machinery (see WP2 for details)

Despite small farm sizes (usually between 1 and 4 ha made up of an average of between five and ten small plots), Kosovar agriculture used to be almost extensively mechanised. Most tractors were small to medium size four wheel tractors made in Serbia and which were used for multiple purposes, including all farm operations and transport. The density of machinery used to be relatively high. For instance the number of tractors increased from less than 7,000 units in 1975 to about 35,000 in 1989, or about 1 tractor for 11 ha of cultivable area (398,000 ha in 1995). However, if we consider the main crop operations such as sowing wheat (on 70,000 ha) or maize (on 100,000 ha), the density appears even higher, with 1 tractor for 3-4 ha of cultivated land which is generally considered more than sufficient. It can be argued that agriculture in Kosovo was in general over-mechanised.

During the 1990s, this situation consistently deteriorated. Almost no investment took place in purchasing new equipment and at the same time, the cooperative system and social sector which were providing spare parts and repair services gradually collapsed. These services were gradually taken over by the private sector which developed partly due to former staff which had lost their jobs looking for work opportunities. During that period, maintenance and repair skills were reported to be of good quality. This was badly necessary to maintain an ageing fleet. In 1995, thanks to the spontaneous development of these efficient service providers, with several dealers and repair shops in each municipality, the fleet of tractors and implements had dropped by only about 10% and the fleet of combines by about 40%. This was from a fleet that was already highly depreciated.

During the war, a large part of the fleet of farm machinery was stolen, destroyed or partly damaged. Despite a number of approximations based on partial judgement, the actual extent of the losses is not accurately known however, a war damage assessment on agriculture will be completed by Mid-September 1999 when a clearer picture of actual damage will emerge. It is, however, already known that the extent of damages is uneven throughout the province and that the most affected municipalities might well have suffered up to 50% of losses or even more. On the other hand there are municipalities which suffered only light damage. Therefore, even if the global damage or loss figure for the province is lower than 50% overall, there is the necessity to identify and concentrate efforts on the most affected areas. In addition, because the pieces of equipment

stolen during the fighting's tended to be the newest and most valuable, and because tractors deteriorated during the exodus, it is logical to assume that the remaining fleet is very aged and in need of repair.

Some of the main constraints are the following: (i) the difficulties in maintaining in working conditions the remaining pieces of farm equipment in this post-war situation because the channel for supplying spare parts in Serbia has been largely interrupted; (ii) the network of private dealers and repair shops has been damaged by direct destruction activities; (iii) some of the surviving pieces of equipment need so much repair that they may not be worth repairing; (iv) the difficult access to new pieces of equipment due to their high price. This problem will be aggravated by the fact that new sources of equipment from European countries (as opposed to Serbia before the war) are more expensive by up to 50%. In addition, the current network of dealers, besides having suffered from direct destruction or looting, are not familiar with new potential sources of imports from countries other than Serbia.

Irrigation and Water Management (see WP4)

The analysis of climatic data and crop requirements shows that complementary irrigation is valuable in about 9 years out of 10 for major crops, and in particular for maize and high value crops such as vegetable, to take best advantage of the rich plains in central Kosovo. During the past 33 years, drought causing serious crop stress (and therefore yield decreases) occurred during 25 years (75% of years).

During the 1980s, partly through WB-financed projects, investment in rehabilitating and extending major schemes was undertaken. In 1990 the irrigable area under formal schemes had reached about 76,000 ha, of which about 56,000 ha were actually irrigated. In addition traditional small-scale irrigation, which has been practised for centuries, was ongoing on an estimated area of 30,000 ha. Private farmers were using individual pumps (about 2,800 in 1989) to irrigate parts of their land and of their neighbours.

However, in the 10 years since 1990, irrigation has suffered from neglect, resulting in a sharp decrease of the irrigated area to 10,500 ha (or 18% of the 1990 level), or to 30,000 ha (54% of 1990 level) according to another source. The deterioration of the irrigation subsector was due mostly to breakdown of the water management system. Most of the ethnic Albanian staff were expelled from the water management companies. This resulted in almost no maintenance of the infrastructure, a reduction in the use of pumping for irrigation, and in some cases a complete stopping of the release of irrigated water from the reservoir. The latter was the case with the Ibar Lepenac scheme (20,000 ha), which almost stopped operation after 1990 when the release of water from the dam was stopped. In addition, over the last several months, additional physical damages included looting and vandalization of parts of the structures occurred.

Today, the main infrastructure such as dams and main and secondary canals is mostly in relatively good operational condition but need heavy deferred maintenance work. On the other hand, a number of structures are badly damaged due to both neglect over 10 years and recent direct destruction; the mission estimates that 30% of valves and hydrants, 100% of electricity supply systems and 30% of transformers and electrical panels needs replacement. In addition, out of a total of 79 pumps used on medium and large schemes, 41 are out of order while the remaining 38 could be repaired. Another major need is to restore a functioning water management system after periods of disruption which lasted between a few months and 10 years. Some of the staff forced to leave 10 years ago took over their positions again a few weeks ago. However, they have no logistical or financial means of operating and they will need to recover some form of authority.

Water charge collection rates are reported to have been satisfactory before 1989 but to have dropped dramatically afterwards because the supply of irrigation water was not properly secured. Nevertheless, to some extent at local level, in order to compensate for the lack of support, informal management structures were organised by farmers to maintain their parts of the schemes while collecting, on a voluntary basis, some water charges from users. These experiences should be further investigated in order to perhaps base part of the future management of the schemes on these successful self-help management entities.

Another major constraint is the possibility of the presence of mines in or around irrigation structures (pump stations, offices, key canals), preventing staff from accessing them. Local engineers have been advised to contact the local NGOs in charge of demining in order to agree with them on the priorities to be quickly addressed.

Agro-processing (see WP3)

The State enterprises mainly include two major milling factories, feed mills, bakeries, 2 export-oriented slaughter houses, a major milk processing plant of a daily capacity of 100,000 litres, 3-4 fruit juice production plants, vegetable processing units, and 5-6 large wineries (of which one is claimed to be the biggest in Europe). Whereas they were working at a reasonable capacity during the 1980's, their operations decreased sharply during the 1990's, to a very low level of much less than 50% of their capacities. Apart a few exceptions such as an industrial poultry farm which was bombed and entirely wiped out, the war did not physically damage them. Their current main constraints are: (i) the lack of financial means and working capital, since their previous management has left and is being replaced by Ethnic Albanian staff who left 10 years ago; (ii) ageing equipment which was poorly maintained during 10 years; spare parts would be needed urgently to repair basic pieces of equipment in some cases; (iii) a degraded relationship with farmers who are providing primary products; (iv) their legal status since their ownership was sometimes transferred to Serbian enterprises in Belgrade; such transfers are not recognised by local Kosovars; and (v) provided that they could become profitable, the need to be privatised in order to ensure proper management.

Private enterprises are of much smaller size. They include about 20 mills, 50-100 small bakeries, semi-private communal slaughterhouses, 2-3 small dairies, etc. Representing the entrepreneurial spirit of Kosovo, they were sometimes particularly targeted during the recent fighting. They were subject to looting (of their stocks or most valuable pieces of equipment), partial destruction and even total destruction. The willingness and ability to restart quickly is there, and it appears that the main limiting factor is the availability of financial resources. In addition, the conditions under which owners and managers have worked during these last years could have both good and bad consequences: on the one hand a strong spirit of self-reliance has been developed; on the other hand, they are used to having to bribe and to often act illegally to operate, which should change in the future.

Marketing of Agricultural Products

The agriculture in Kosovo has always been oriented largely to self-consumption, with only a small proportion of products marketed. Limited surplus quantities were sold on local markets. During the 1970s and 1980s, marketing of a larger share of the agricultural production from private farmers (in addition to the production from agro-kombinat land) was encouraged by investing in large processing enterprises which are part of the agro-kombinat structure. For instance, the Fush Kosova (Kosovo Polje in Serbian language) dairy plant (daily capacity 100,000 litres) was

gathering milk from about 150 milk collection centres around the province. The Rahovec winery was collecting grape from 4,400 ha of private vineyards (corresponding to a few thousand farms) as well as from the 970 ha own by the winery. The same system applied for fruit and vegetables. However, during the 1990s, this system collapsed, for several reasons: (i) the willingness of Serbia to sell its processed agricultural products and therefore to squeeze the local marketing and processing entities; (ii) almost no investment in marketing and processing infrastructure during 10 years and the closing of some major agro-industries; (iii) nearly all key managers and technical Kosovar staff expelled from these entities. As a consequence the food deficit of the province increased, and in 1997, Kosovo was not self-sufficient in any of the major agricultural products, from wheat (which had always be the case) to potatoes, milk, sugar, meat, fruits and vegetables. In 1998, the situation worsened further. It is somewhat surprising to learn that Kosovo was importing milk for towns with a herd of more than 200,000 producing cows, or bringing in juices, processed fruits and vegetables while heavy investment in irrigation facilities and processing industries had rendered the central plains of Kosovo highly productive. Statistical figures on consumption and production of agricultural products in 1997 and 1998 are shown in Table 1. On average during the 1990s, Kosovo was « importing » agricultural goods worth 490 million DM, mostly from Serbia. Following the war, the situation is one of shortage of locally produced agricultural products. This has been compensated for by easy imports which limited the price increases of these products: eggs sold at 0.16 DM per unit against 0.10 DM before the war; meat at 7 DM per kg against 5 DM before the war. The fact that, in Pristina today and only a few weeks after the war, market stalls are full of vegetables, rice and beans is a sign that traders are active and quick. However, the situation is much worse in the rural areas where those products are less affordable, although often available.

The issue now is to **restore a conducive marketing environment** that would motivate farmers to sell part of their products but that would not rely on the agro-kombinat structures, whose recovery (if ever economically viable) would take time and need privatisation and deep structural reforms. The purpose is not to be self-sufficient in all agricultural products but to favour those products with good potential. Newly emerged private processors and traders will play a key role: they are very active³⁸ and have developed largely during the 1990s. Their current number is unknown but is likely to be high. One difficulty now is that these traders are used to working under restrictive conditions and therefore sometimes to acting illegally (crossing borders bribing fiscal police and customs, etc.). The trading sector should be encouraged to adapt its practices both financially and legally to a new trading environment so that risks of illegal activities (unallowed imports, exports, tax evasion, etc.), or of penetration of the sector by criminal organisations remain limited.

In addition, the marketing of some key products in a more structured way, rather than just leaving it to private traders, could also be supported. This in particular is the case with milk collection. In view of the comparative advantages of Kosovo for milk production, supplying the towns from local sources with good quality milk and dairy products would generate good benefits for the province: additional incomes to farmers, cheaper prices for consumers, savings in foreign exchange.

Input Supply

³⁸ This was spectacularly demonstrated in June/July 1999 when, within a few days, they managed to bring all kinds of agricultural products (mainly from Macedonia) in Kosovo, thus diminishing the perception of food shortage in the province.

The evolution of the system of input supply is similar to that of the marketing of agricultural products. In the 1970s it was largely organised by the agro-kombinat for themselves and affiliated farmers. In the 1980s however, as a result of a World Bank financed project, a network of 140 cooperatives of about 1,000 to 2,000 households each was developed in parallel. The purpose was to improve the access of a larger number of private farmers to inputs and marketing of their products outside of the agro-kombinat system. Together with these cooperatives, a network of 96 centres, where farmers could purchase inputs and sell part of their production, was set up. At the beginning of the 1990s most of the key positions in these entities (both agro-kombinats and cooperatives) were transferred from ethnic Albanians to ethnic Serbs. Simultaneously, over the decade, and as a result of the embargo on Serbia and a policy of restriction, the quantities channelled through these formal channels dropped dramatically. For instance, according to official statistics, the formal use of fertilisers by private farmers dropped in volume about 10 times to almost nothing between 1985 and 1996! Farmers obviously lost interest in these structures. They are no longer functional and the condition of their infrastructure (mainly storage facilities) following the war is unknown.

As for the trade in agricultural products, the number of informal (and often illegal) dealers in agricultural inputs developed rapidly during the 1990s. As they were working under difficult conditions (need to pay official taxes, bribes, problems at the borders, no bank, embargo on Serbia, etc.), they were only able to partially compensate for the collapse of the formal system and partly cover the needs of farmers, but this was essential for maintaining a minimum level of agricultural productivity. Fertilisers were illegally imported from neighbouring countries such as Albania and FYR of Macedonia, and seeds were mostly brought in from Vojvodina in the north of Serbia. Private shops selling chemicals, seeds and fertilisers were opened in rural areas to service the farmers; it is estimated that there were about 4-5 of these shops per municipality, i.e. 100-150 shops in the province.

Similar to the trade in agricultural products, these traders and shops are expected to take the lead in restoring a functioning system of input supply, which is a good basis for future rural development. Mechanisms should progressively be established to ensure the quality of inputs such as seeds, fertilisers and chemicals, since this is an area in which farmers could be abused and there is very little control on their trade. However, these private dealers and shops should not be constrained in their activities by unduly heavy regulations and controls. The question of whether or not to revive the cooperatives and their affiliated centres (and warehouses) is open, and should be resolved in the new future: if they are not supported, they are not likely to easily re-start their activities. In any case, if a credit line is proposed to entrepreneurs (as explained below), cooperatives with a good project should not be excluded but should be treated in the same manner as private traders.

Rural Finance

The rural finance sector was not investigated by the mission, as it is covered by a more detailed and comprehensive review of the financial and banking sector in Kosovo by World Bank and IMF teams. In brief, before 1989, local commercial banks were ensuring the necessary financial services to mobilise savings and to provide loans for rural enterprises. In particular, the Bank of Kosovo was owned by Kosovar shareholders and had 7 affiliated branches in the province. It was covering all economic sectors, including agriculture and agro-processing. At that time, the main clients were from the social sector but also to a small extent private investors.

Belgrade decided to close this bank in 1990, and US\$ 120 million of accumulated savings have claimed to have disappeared. In addition, other local banks were taken over by, and became branches of banks established in Belgrade. The local activities of these banks were reduced to almost nothing beyond the channelling of funds from and to other parts of Serbia for transactions and payment of salaries to public employees. Confidence in this banking system will therefore be difficult to re-establish. Today, none of the previous banks are operating, and this is a major constraint to further development of the rural economy, particularly if credit lines or grant funds have to be rapidly established to support the economic reconstruction of rural enterprises and services as explained below. Also, in the longer term, a system of agricultural credit should be established to support private farming. The Bank of Kosovo intends to restart operations and is calling its shareholders, but as noted by the IMF there is no registration process currently available.

Technical Skills in Agriculture

As in other parts of Yugoslavia, technical knowledge used to be largely concentrated in the agro-kombinat structure which was supposed to be the centre of technical excellence of agriculture. Agricultural universities and schools were producing specialists who often ended up in Agro-Kosovo with little influence on the private sector (which however was cultivating 95% of the land in Kosovo). Consequently, private agriculture achieved a lower performances than social agriculture, despite the more intensive use of labour and greater care given to animals and crops on private farms³⁹. However, during the 1980s as part of the above-mentioned World Bank-financed project, the federation of 140 cooperatives employed an extension service of about 200 technicians to advise farmers. This service included agronomists, livestock specialists, veterinarians, etc. located all over the province. According to senior staff who had previously worked in these structures, the level of productivity of private agriculture increased by 50% during the 1980s largely as a result of this cooperative system which improved farmer's access to adequate inputs and agricultural techniques.

In the 1990s, this system was dismantled and of the estimated 1,500 agricultural technicians and engineers in Kosovo (of which 1,200 graduated from the Pristina faculty of agriculture), only a very small percentage continued to be employed by the agro-kombinat. None of the 200 technicians employed by the extension services were retained. Of the 1,500 specialists, about 300 created their own private business in agriculture such as a pharmacy or shop for agro-chemicals. Some of them continued to provide services to farmers but for very little remuneration. The majority either took refuge outside Kosovo or embarked in informal activities in Kosovo such as, at best, trading farm inputs or other products. Re-establishing some kind of technical advice services to private farmers might well become essential in order to reverse the decreasing production of agriculture which has already reached very low levels. To this end, an assessment of the possibility to recall some of these technicians and the feasibility of re-training them after having lost up to ten years of professional activity will be necessary.

Indeed, training agricultural staff in order to up-date and up-grade their skills will be a priority in the medium term because of these ten years of regression. It will also be necessary to train new, younger, staff. During the 1990s, most of the ethnic Albanian professors were expelled from the official Faculty of Agriculture. However, despite these difficulties, and thanks to the parallel budget mobilised during this period (see above), an alternative Faculty of Agriculture was set up to provide training to new students. However, this was carried out at a reduced capacity, and the faculty was largely operating in isolation from other education and research structures in the world. An upgrading of their facilities and education level (through overseas training of some of the staff for instance) will be necessary.

Forestry (see WP5)

³⁹ It should be noted that this was also due to the fact that agro-kombinats were often attributed the best land in the republics of Yugoslavia (this is the case in Kosovo) and were secured a greater access to larger quantities of inputs.

In 1989, forest covered about 430,000 ha, of which about 266,000 ha was in the public sector. However, productive forest resources appear to be limited as only 72,000 ha was high canopy forest and 31,000 ha medium canopy forest with the remaining (75%) being low canopy forest and shrub and degraded vegetation. The resource was further depleted during the 90s when large quantities of good quality logs were transported to Serbia and fuel collection was poorly controlled. The extent of direct war damage due to bombing and mines is now unknown.

The main constraints faced by the forestry sub-sector are: (i) the need to restore an adequate and respected forest management system and structure; (ii) the risk and the fear of over exploitation of resources, in particular for fuelwood for which the need is estimated at about 2 million m³ (compared with an allowable cut of about 400,000 m³); (iii) mines in forest areas and access roads; (iv) the direct damage of the war, which could cause the spreading of diseases, should be quickly assessed once the mine problem has been resolved.

Wood Industry (see WP5)

Prior to 1989, eight State plants were mostly producing furniture. During the 1990s, their activities decreased; their equipment was stolen and some of them ceased operations. An exception was the Istoq factory which was a modern plant created in 1988 and which was still operating when the war started earlier this year.

However, there might now be more than 60 private enterprises of relatively significant size which developed during the 1990s and which are processing wood imported from Montenegro, Slovenia, Albania, Ukraine or Bosnia and Herzegovina. Areas of concentration are Istoq (with a good reputation) and Prizren. These enterprises had usually invested in good quality imported equipment and seem to have produced high quality windows, doors, furniture, etc. In addition, there are numerous other small ones (35 alone in the Istoq municipality). During the war, most enterprises were left unguarded and the majority of them were looted and/or burnt out.

An obvious way to support the re-emergence of the wood processing sector is for donor supported reconstruction programmes to purchase construction materials (including windows and doors) from them. Some of these private factories have suffered limited damage and are already in a position to start producing again: one of them was visited by the mission in Djakova and could immediately produce up to 1,000 units (windows and/or doors) per month if they are provided with some advance payment or working capital. There are other factories in this situation which could restart operations if credit is made available through the recovery fund as explained below. Regarding the State-owned enterprises, besides the problem of their ownership and privatisation process, a careful analysis of their financial viability should be undertaken before they should be revived.

Rural Administration (see WP6)

Although there is no recognised Government at this moment, an administration is being set up to some extent, in particular at local level, where prefects have been appointed to administrate the municipalities. Under them, an agricultural coordinator is in charge of agricultural matters, including damage assessment and elaboration of strategies for recovery. Interestingly, informal discussions with one of these coordinators in Djakova confirmed that the priorities expressed in this report was largely shared locally, i.e. re-stocking activities as a first choice, distribution of animal feed, support to agricultural machinery, reactivation of agro-processing. Similarly, economic committees were created in each municipality in order to record data on the evolving situation and assess war damage.

IV. From Needs to Action: Strategy for a Potential Programme

Design Considerations

The following considerations have been reflected in the design of the proposed Rural Economy Reconstruction Programme.

1. The need to combine urgent interventions such as to repair some of the most critical physical damages caused by the war with measures to re-build a sustainable rural sector supported by effective institutions. In particular, it is important to **use the process of re-investment in farm assets not only to rebuild the physical base for expanded production but also to create the local institutional capacity required to underpin the longer term development of the rural economy**;
2. The importance of addressing both needs for poverty alleviation (social objective) and opportunities for reconstruction of the rural economy through investment;
3. The need to introduce enough flexibility in the design of the programme in order to enable it to adapt to a rapidly evolving situation;
4. The advantages of relying on private initiative as much as possible for the purposes of economic recovery but with some necessary control and guidance mechanisms. However, in the short term and in view of moving quickly, some activities should still be organised by the public such as relief supply of inputs and procurement of large quantities of animals and some equipment;
5. The importance of striking the right balance between grants and credit funds to support the reactivation of economic activities. As most of these will operate on commercial basis, much of the funding should be in the form of recoverable loans. However, considering the extent of war damage incurred by some enterprises there is a justification for using some public funds in the form of grants towards restarting operations;
6. The adoption of innovative procurement and allocation mechanisms which would not compete with local enterprises and/or pose minor cost recovery difficulties;
7. The advantages of favouring, to the extent that this is feasible, local or regional sourcing of supplies of goods and services (e.g. wooden construction materials, farm inputs);
8. An acknowledged need to target some of the proposed activities geographically because the level of damage is uneven in the province and the funds eventually released by donors are expected to be insufficient to cover all needs;
9. Finally the importance of transferring the management of the programme to local actors as soon as an official Government will be recognised by the international community, and therefore the need to build up local capacity from the outset of the programme.

Rationale for Programme Interventions

Beyond the supply of food aid organised by WFP with the support of NGOs, the **first task** is to address most urgent needs of the agricultural sector to **restart farming operations** with the immediate aim of maximising the area sown, particularly to winter wheat, during the coming autumn. FAO's Special Relief Operations Service (FAO/TCOR) has been active in the field since June, coordinating with the NGOs, seeking to attract donor funding and implementing some of the necessary activities. These include the supply to farmers of annual farm inputs such as seeds, fertilisers, chemicals, animal feed, the provision of some spare parts to repair remaining farm machinery, and the organisation of vaccination campaigns. The following programme assumes that these urgent needs will be met.

As previously mentioned, Kosovo is poor and the recent massive destruction in some rural areas has rendered farm households highly vulnerable and food insecure in those particularly affected villages. Besides land, the production base of the farms was mainly formed of animals and farm machinery. Those households which have suffered substantial losses will not be able to recover except in the long term without access to external support. In the present situation, animals and farm machinery are neither affordable nor available for those particular farms and the reconstruction of those assets would take years unless they could be provided rapidly. Normal agricultural production would then remain impossible, with the risk of aggravating poverty and increasing migration from rural areas. A **"social pillar"** is, therefore, proposed as part of the Programme to alleviate the most serious manifestations of rural poverty and enhance food security by supporting the most vulnerable rural households in re-building a part of their farm assets, lost during the recent war. This would consist of the urgent procurement and carefully targeted distribution of farm animals (mostly cattle and sheep) and machinery (tractors, implements and combine harvesters) **over a period of 12 to 18 months and would help to jump-start agricultural production** which would otherwise take a much longer time to recover. Partial cost recovery – some of it in kind – would be used for the broader benefit of participating communities. The development over the past 10 years of rural private enterprises is certainly one of the keys to recovery of the rural economy and will play a major role in the return to sustainable rural development. These enterprises provide essential support services to the agricultural sector and create added economic value as well as employment in rural areas. However, they have suffered from both 10 years of policy constraints and recent direct destruction, looting or disruption of their activities. Therefore, in many cases, they cannot restart normal operations unless financial resources are made available. However, the types and needs of these enterprises are various and evolving. Therefore, the **"economic pillar"** of the Programme would consist of rapidly setting up, financing and managing a flexible **Rural Recovery Fund** to support productive investments by these enterprises. The Fund would advance a blend of loans and grants and operate on a demand-driven basis.

The deterioration of rural public services over the past 10 years has been aggravated by their recent disruption due to the war. The result is that there is now an important deficit in functioning services such as those related to crop protection, animal health, irrigation, forest management, agricultural administration, policy and law. Although many Kosovar staff are returning to posts from which they were dismissed 10 years ago there is a shortage of trained manpower to organise and manage these services. There is therefore a need to quickly restore some of the most urgent public services and to start the longer term process of re-building a capacities so as to create a favourable enabling environment for the development of a privately owned and managed farms and rural enterprises. This would be addressed by the proposed **"capacity building"** pillar of the Programme. It would support the re-establishment and initial operation of those basic services

which are considered essential for the recovery of agriculture and sponsor legal and regulatory measures for the privatisation of the enterprises and the land owned by the agro-kombinats as well as for the establishment of rural banking and savings and credit associations. Some of the proposed actions are urgent but most of them would be implemented at a later stage since they require thorough preparation work, active participation of local institutions and an unambiguous policy framework. The management of the Programme would be part of this pillar.

Summary Table of Proposed Programme Pillars

The following Table highlights the main features of the three pillars which are further analysed in the following sections.

Summary Table of Proposed Programme Pillars

Pillar	Main purposes	Possible Content	Possible Organisation
1. "Social Pillar": Procurement of farm assets	Poverty alleviation, food security, widespread re-investment at farm level	Distribution of animals (cattle, sheep, etc.) and farm machinery and implements to most needy households in particularly destroyed areas	Centrally managed procurement. Need to target interventions.
2. "Economic Pillar": Rural Recovery fund	Reconstruction of private enterprises to underpin recovery of the agricultural sector, create rural economic growth and generate employment	Financing of primary commercial production (e.g. chicken), food and wood processing, private service suppliers (inputs, farm machinery, traders, etc.) through combination of loans and matching grants.	Demand-driven, flexible fund, with requests being appraised by independent team: technical assistance to be provided for formulation of micro projects.
3. "Capacity Building" Pillar:	Progressively restore a favourable enabling environment for private agriculture	<ul style="list-style-type: none"> - Make the most urgent services functional as soon as possible. - Clarify the ownership of land and enterprises managed by agro-kombinats and prepare their privatisation; - Work on legal and policy issues; - Prepare for the establishment of rural financial institutions. - Establish programme management units, using them to build up capacity (on the job training) of reactivated essential public services. 	<ul style="list-style-type: none"> - Assist UNMIK and future Government structures in establishing services and preparing agricultural policies. - Rapidly set up specialised implementation units attached to UNMIK.

V. "Social Pillar": Urgent Procurement and Distribution of Farm Assets

For most of the farm households, main assets were: (i) farm buildings (both for living and shelters for animals and/or machinery); (ii) animals, almost always cattle, sometimes complemented by sheep, goats, pigs, chicken, etc. (see WP 1); (iii) farm machinery, related implements and other tools (see WP 2). As previously mentioned, losses in these three categories are thought to be considerable, although uneven. Regarding farm buildings, the first priority of current humanitarian assistance and large-scale reconstruction programmes is to provide a roof for as many farmers as

possible. This component of the proposed programme would concentrate on **procuring two types of items: pregnant animals to speed up re-stocking with ruminants⁴⁰ (and possibly animal feed to enable the remaining livestock to maintain adequate production levels) and urgent items of farm machinery⁴¹.**

As previously mentioned, one of the strategies of the programme would be to rely on local initiative and private sector to support the reconstruction of rural sector. This is the object of the « economic pillar » described below. However, besides the latter, it has been considered that the **centrally managed procurement of the key items listed above for distribution to a large number of farmers who have suffered serious war-inflicted damage is an urgent necessity for the following reasons:** (i) none of the proposed items is available in sufficient numbers locally and would largely have to be imported; (ii) the rapid import of most of these items on the required scale (animal feed, cows, etc.) would be a one-time measure for which the private sector, as now constituted, has neither the experience nor the capacity (for farm machinery for instance); (iii) the procurement of farm animals requires contacts with suppliers, technical skills to identify suitable animals and in particular sanitary measures (such as controls and quarantine of animals) to avoid any major disease problem; (iv) bulk purchase of some widely used pieces of equipment (easily identifiable) and procuring them through international competitive bidding would have several benefits: rapidity; cheaper prices, and introducing competition between suppliers to penetrate the market in Kosovo; (v) finally, in view of the expected limitation of available funds, only a small proportion of overall needs will be covered by this component (say about 10% of needed animals and farm machinery): this means that first, this would hardly distort the development of local private initiative and, second, that the supply of these assets should be targeted to pre-selected villages and households on the basis of transparent criteria and therefore this process has to be centrally organised; (vi) the targeted farmers would be the most needy ones (poorest ones and/or war-affected ones) and would not be able to purchase these items on their own from the market. In addition, the procurement of farm equipment would involve local dealers.

Supply of Pregnant Ruminants

As mentioned above, in some areas the livestock population has almost entirely disappeared. In those areas, the reconstitution of the herd of ruminants through natural build-up would take many years due to the slow reproduction process (as opposed to pigs and chicken). However, cattle and sheep are essential for rebuilding a normal livelihood on the farm: they are a main contributor to family food security (milk and milk products, meat) and organic manure and the sale of offspring is a valuable source of cash income. The poorest and most war-affected farmers would neither find enough suitable animals on the market nor be able to afford the purchase of these animals. The proposed re-stocking activities draw heavily on the experience of such activities implemented in Bosnia and Herzegovina in 1996 the impact of which was carefully assessed in 1998 with the support of FAO⁴². Lessons have been learnt and improvements will be proposed in particular with regards cost recovery mechanisms. At that time, about 3,900 pregnant heifers and 1,400 pregnant

⁴⁰ However, in order to ensure the viability of imported animals, this component could supply some farmers with most needy construction materials for repairing animal shelters if necessary.

⁴¹ It is important to note that only a part of the necessary farm equipment would be imported by this way. Another share would be imported through the established private dealers.

⁴² Federation of Bosnia and Herzegovina. Emergency Farm Reconstruction Programme. 1997 Impact Assessment Report. Summary and conclusions of this report are attached as an Appendix to this report.

goats were procured. In view of the failure of the goat import, it is recommended to concentrate the re-stocking activities on cattle and sheep in Kosovo.

More technical details and recommendations related to this programme (proposed species, breeds, sanitary measures, etc.) are provided in WP1. Livestock should as far as possible be procured in the province, while this might only concern a very limited number of animals it is worth making the effort⁴³. Some areas less affected by destruction might be a source of supply, and some farmers could be in such a desperate situation (e.g. to find funds to re-build their houses) that they would sell animals. In both cases, the project should identify these cases and buy the good quality female animals in order to prevent them from being slaughtered. However, it is foreseen that the immense majority of animals will be procured from other countries. The availability of sheep in the region (e.g. FYR of Macedonia) should be investigated; cattle would most likely be imported from other European countries through competitive bidding.

The need for quarantine stations will be further assessed in September. The quarantine duration should be kept as short as possible. However, it is important that enough quarantine stations be established, equipped and supplied with animal feed before the first animals arrive. This is proposed to be financed as an emergency measure under «Pillar 3: critical agricultural services» of this programme. It is strongly advised that the animals are procured so as to arrive *not before* Spring 2000 in Kosovo. An earlier arrival would be very risky: the time necessary to procure and transport the animals, for selecting recipients or completing quarantine and for arranging distribution could result in the animals arriving in the middle of winter on the farms with a high risk of feed shortage and difficult adaptation. The following numbers of animals to be imported are only indicative at this point. They will be defined with much better accuracy when the results of the damage survey and need assessment will be known in September. The final numbers will be based on a detail review of needs and on the availability of animals on the European market. For the moment, a replacement of 10% of rough estimate of animal losses has been assumed. This would correspond to about 10,000 pregnant heifers (at a unit price of US\$ 1,500) and 5,000 sheep (at a unit price of US\$ 200). The total cost would be about US\$ 18.6 million, including 10% of contingencies to cover quarantine and distribution expenses. Realistically, rather than meeting all local needs, the number of animals will certainly depend on the financial resources being made available by donors.

During the next mission in September, the possibilities to diversify the type of animals to be procured should be investigated. For instance, males could be needed for breeding purposes if they are not available locally. Thought could also be given to importing young stock, particularly female calves but also ewe lambs. The advantage is that they would be less costly, easier to manage and have more time to adapt to new local conditions. On the other hand, it would then take more time to re-stock the local herd and benefits would be longer to materialise from milk production and sale of offspring. Other species could also be investigated such as poultry or rabbits. However, these could certainly be procured in the region through local sources of importation (e.g. from Macedonia) and could be financed through the Rural Recovery Fund described below.

The situation of animal feed over the next winter is very not clear. Farmers are now actively harvesting winter fodder, but this will be of low digestibility, poor in energy and protein, especially because of late harvesting due to the war. On the other hand, the number of animals is much reduced. Before additional animals are brought in, it might be necessary to improve the

⁴³ The on-going war damage survey to be completed by Mid-September will provide valuable information related to the availability of suitable animals on local markets.

quality of feed by complementing this low-quality roughage with sufficient concentrate feed over 150 days in winter in order to increase the supply of milk and reduce losses of weight of animals, particularly cattle and sheep. As an indication, based on assumptions presented in WP1 (Appendix 2) related to the numbers of remaining animals (about 80,000 breeding cows and 100,000 sheep) and minimal daily quantities of feed per head (2 kg per cow and 0.5 kg per sheep), the minimum needs have been estimated at 28,500 tonnes. This should be procured on international market at a tentative price of US\$ 200 per tonne. The total would account to about US\$ 5.7 million.

However, this need should be confirmed during the next mission and in particular whether it will be covered by Mercy Crops International. In 1998 and early 1999, with the financial support of the EU (DG1a), this major NGO was implementing such a programme for an amount of up to Euro 3.0 million (12,000 tonnes) which was interrupted by the breakout of hostilities.

Procurement of Farm Machinery and Implements

It is proposed to meet a small percentage of the most urgent needs in well targeted areas and households through the procurement of the most commonly used pieces of equipment, including multipurpose tractors which were widely used before the war, combine harvesters, trailers and other implements. Because many of the most needed pieces of equipment can be easily identified (such as tractors and combines), and therefore the bulk of this farm machinery can be specified and would be most efficiently procured centrally through competitive bidding. For other less universally used equipment a more flexible procurement procedure, however, will be necessary for complementary equipment and implements in order to meet the specific and evolving needs of farmers.

As has been previously mentioned, the full extent of the damage is unknown. More information will be available on losses and current needs once the damage assessment survey has been completed in September. In addition, the pace of recovery of activities of local dealers should be assessed to evaluate the possibilities of recovery through private initiatives. Again, as for the livestock part of the pillar, the final numbers will certainly be limited by availability of funds. At this point however, in order to make a preliminary estimate of the scale of investment needs for replacement, the mission made working assumptions concerning losses at levels of 10%, 30% and 50% of the previous fleet according to individual municipalities (see WP2 for more details and calculation tables) and their preliminary assessed level of damage. Fifteen municipalities have been assumed to have suffered heavy losses (50%), 10 of them medium losses (30%) and 4 of them limited losses (10%). By using current estimated international prices and by assuming that the programme would replace 25% of the losses (which corresponds to about 10% of the total fleet), the total cost would be about US\$122 million before Spring 2000 (mainly corresponding to about 3,000 tractors and implements) and a further US\$28 million before Autumn 2000 (mostly combine harvesters for the wheat crop).

Procurement procedures will need to be carefully elaborated during the proposed mission in September so that: (i) the types and specifications of the equipment procured fits with the needs and capacity of targeted farmers; (ii) the procurement process involves local private entrepreneurs active in dealing in farm machinery (for instance, external bidders should demonstrate a contractual relationship with local dealers or they should be contractually obliged to establish a local dealership; and (iii) competition between different suppliers of farm equipment should be instigated by, for example, the selection of at least two suppliers for the main types of farm machinery. The purpose of this would be to develop a sustainable farm machinery input supply chain instead of just a one off procurement operation which would disregard or even adversely

affect the future interests of the support services sector. An interesting experience prepared and implemented by FAO's Agricultural Engineering Branch in Albania where some conditions are similar (no reliable banking sector and no presence of an established private dealer network) will be incorporated in the design of the component. In the case of Albania, dealers were heavily involved in procuring and servicing the farm equipment financed by the project but were also responsible for providing project supplied credit to their customers.

An major uncertainty at this point is whether and when commercial relationships will be re-established with Serbian producers of types of equipment which are currently used in the province and with which any new equipment should be compatible.

VI. "Economic Pillar": Rural Recovery Fund

Main Rationale and Strategy

This **Rural Recovery Fund is designed to respond in a flexible manner to the current and changing investment needs of all types of enterprises**⁴⁴ involved in primary commercial production, as well as upstream (providers of inputs, repair and/or import of farm machinery) and downstream (traders, storage facilities, processing enterprises) aspects of agriculture. It is designed to be a blend of credit funds (to be repaid on commercial terms) and grants.

Before 1989, all the above activities (commercial primary production, marketing, services, processing, etc.) used to be the main responsibility of the agro-kombinats in the province. As explained in Part II, during the 1990s, a **large number of private enterprises and businesses were created** under very difficult conditions and without any support from the Government. Despite these constraints, they were almost the only source of functioning services and enterprises in rural areas while the social sector was collapsing. However, during the recent fighting most of these enterprises suffered from either being destroyed or partially damaged, being looted, or just simply from the fact that their operations were stopped.

The first priority would be to assist those private enterprises whose operations have been stopped or affected by the recent war and for which the supply of financial resources is the limiting factor to restart normal operations as quickly as possible. Indeed, a survey of about 300 enterprises undertaken in 1997 revealed that the three perceived most important limiting factors to progress were the political situation and insecurity (33% of respondents), the lack of bank support (24%) and the lack of capital (21%). The first factor is in the process of being eliminated.

In addition to these private enterprises, and under strict conditions (see below), some socially-owned enterprises could be added as qualifying for small loans in order to restore partial operations interrupted by the war.

For both private and social enterprises the needs for loans are urgent and operations should start as soon as possible. On a longer term (e.g. after the first six months of operation), credit could also

⁴⁴ The term « enterprise » is to be understood in its wider meaning. It encompasses factories, businesses, shops, traders, suppliers of inputs and of various services, local development activities of a community. It can be under the ownership of individuals, group of private investors, cooperatives, even communities of farmers.

be advanced to finance the creation of new enterprises as well as the restructuring and modernisation of newly privatised large size processing facilities if they are found through feasibility studies to be potentially economically viable.

Rapid Support to War-affected Private Enterprises and Service Providers

Most of these private enterprises have emerged over the past ten years, partly compensating for the decline of large-scale enterprises belonging to the agro-kombinats during the period. The Rural Recovery Fund would support these enterprises who have suffered during the war in different ways: (i) direct destruction of some of their assets (buildings, equipment); (ii) loss of part or all their production and/or working capital; and (iii) disruption of their activities which leads to cash flow problems.

The following categories of enterprises could benefit from advances from the Fund:

- (a) **Primary agricultural production on a commercial basis**, sometimes called mini-farms and mostly involved in livestock production (see WP1, para 5 (i)). This includes dairy farms producing milk for the market (e.g. about 10-20 milking cows), poultry production (e.g. 2-4,000 laying hens), pig production and other family enterprises oriented to commercial production of animals and animal products. One of the purposes is to supply urban markets where the demand is currently covered by food aid and imports. In a first phase, the fund would finance repairs and rehabilitation of existing enterprises before envisaging, as a second step, the financing of new ones.
- (b) **Small or medium size private processing enterprises**. This could include a wide range of businesses such as mills, bakeries, slaughterhouses, dairy plants, fruit and vegetable processing, cold storage, wood processing factories, etc. The aim would be to restore supplies of basic processed agricultural and forest products to urban markets. Regarding wood processing activities, some of them have suffered from being looted or burnt out during the war and could restart with adequate financial support. This activity should be particularly favoured in the present context of housing reconstruction programmes which will need important quantities of construction materials. (See WP5 for more details);
- (c) **Providers of agricultural services**. Private veterinarians, repair workshops for farm machinery, businesses producing and distributing improved seeds, networks of milk collection points, and other private providers of key services to farmers would also be supported by the Fund.
- (d) **Private traders and dealers** which supply farmers with agricultural inputs such as fertilisers, seeds, chemicals, spare parts, implements, etc. and market their products. They developed during the 90's but a number of them suffered during the war from looting, destruction, etc. At the same time as relief operations and the "social pillar" of this programme are implemented, it is important to strengthen the capacity of private sector which must assume responsibility for input supply and marketing. In this category, the **95 cooperatives and related 140 shops** established in the 80's could also apply to the Fund provided that they have a viable recovery programme. (The question was raised during the mission on whether to revive this system now

that the Serbian restrictive policy was over. It is too early to answer as this activity should fit into a longer term agricultural policy which still has to be defined);

- (e) Finally, **farmers' communities** could also access the Fund if they have viable joint project proposals for boosting the economy of their community;
- (f) **Socially owned enterprises** (see below) could qualify for short-term loans in particular cases.

The main purpose of separating these enterprises into several categories is that they have different needs in relation to their technical features; their financing needs in terms of loan amounts, repayment and grace period, the balance between credit and grant funds.

The Case of Socially-owned Enterprises

Some large-scale socially owned enterprises critically needing working capital have been identified by the mission (see WP3). They should be supported provided their loan applications fit the following conditions:

- the loan would be used only for working capital and/or operating expenses, i.e. not for investment purposes. Indeed, until the ownership of these enterprises is clarified and/or they are privatised, no investment should be financed. However, meanwhile, limited amounts of money to restart operations or maintain a minimum level of production could be provided on the ground that this would not change the structure of the fixed assets of the enterprises. The funds could be used to finance the purchase of production materials, purchase of primary products from farmers, replacement of missing spare parts, etc.;
- the loans would enable selected social enterprises to rapidly restore at least partial production of final products which had been disrupted as a consequence of the war. Therefore, the subsequent sale of final products should allow the enterprise to repay back within a short period limit to be determined at preparation (say not more than 6 or 12 months) and at the same time produce enough income to justify the loan;
- the operations of the enterprise should have a positive impact on primary agricultural production by providing a market for farmers' produce;
- in any case, the loan should not exceed a ceiling of DM 100-200,000 (figure to be further worked out during preparation) and a repayment period of 6 months (or 12 months?).

Concrete examples of such enterprises have already been identified during field visits in July 1999. They are presented in WP3 and include mills, vegetable and fruit processing factories, wineries, etc.

Creation of New Enterprises and Privatisation Process

As mentioned earlier, the financing of additional enterprises or newly privatised old ones would be considered later in the reconstruction programme because: (i) the feasibility study and financial analysis require more preparation; (ii) the size of individual loans might be more important than in the previous cases so that a more formal banking system is preferable which is not yet established, and; (iii) the legal aspects of ownership and privatisation have first to be addressed.

However, the creation and financing of these new structures will be vital for the growth of the Kosovo economy following the policy-induced collapse of many such enterprises. Concrete possibilities of investments will be further worked out during the later stages of programme preparation. However, some of them are already identified and relate to: milk collection and processing; processing of meat, vegetables, fruits; wineries; etc.

Conditions for the Use of the Rural Recovery Fund

One of the main issue relates to the share between allocation of loans and grants. Indeed, although the supported initiative are mostly based on private and commercial activities, the current exceptional post-war situation make it necessary to introduce a grant element in the financing plan of recovery of these enterprises. The basic principle is to allow a loan covering a percentage of the financing needs, the remaining part being covered by a matching grant. The balance between those two elements will be based on three main considerations: (i) the type of enterprise: for instance, dealers and traders might need much less grant than veterinarians as their capacity for rapid recovery and profitability would be much greater; (ii) the extent of public interest in restoring the enterprise (i.e. the nature of the service provided and their strategic importance to the restoration of “normal” life in the province: and (iii) the extent and nature of war-inflicted damage or destruction suffered by the enterprise. These criteria should be firmed up through a process of local consultation by the proposed September mission (see below), be transparent and widely publicised, once the Fund is created.

Given the importance of creating conditions which would encourage the rapid re-establishment of a commercial banking system in Kosovo, it is essential that the loan elements of any advances made by the Fund would be on market terms, and with the intent of ensuring full loan recovery. Details of terms and conditions would be worked out at a later stage, starting in September, covering the following main elements: (i) maximum loan size for private and public enterprises (typical loans could amount to between US\$ 10,000 and US\$ 100,000); (ii) repayment and grace periods which would vary from one activity to another, but should be as short as possible in order to facilitate the establishment of a good discipline in terms of repayment performance: ideally the term of loans should be close to the minimum period necessary for the enterprise to generate enough cash income to cover repayment of principal and interest; (iii) interest rates should be common for all activities and consistent with those being applied in other sectors of the economy as part of the reconstruction programme; and (iv) type of guarantee required from the enterprise: here some innovation would be necessary because of the extent of asset destruction and, in many cases, the loss of documentary proof of ownership which could be held as collateral. In any case, **the legal framework and the capacity to enforce it should be in place before loans are**

allocated so as to discourage bad debts. According to UNMIK administration, Yugoslav laws and regulations are still valid and are to be complemented by UNMIK decrees.

The following considerations should facilitate the provision of satisfactory guarantees: (i) the financing plan for most proposals would involve a mixture of credit, grants and own equity and therefore the guarantee should cover only the loan element; (ii) in many instances, at least initially, credit would be used to restart an existing business by providing working capital or repairing existing infrastructure or equipment, implying that the loan amount would be limited compared with the value of the asset of the enterprise which could then be used as a collateral; (iii) as explained below, the proposals would be reviewed by a team of independent experts who would also have to investigate the reputation of the borrower in his neighbourhood; (iv) for some cases (such as processing enterprises requiring a limited amount of working capital to enable them to restart production), a lien on the final products and/or stocks could be used as collateral: this could be the case with socially-owned enterprises for which new ownership arrangements are not clarified (an example could be a winery which would borrow for importing bottles and labels in order to be able to market some of its stocks of wine).

VII. "Pillar 3": Public Services and Capacity Building

In order to enable the recovery and development of a dynamic private agriculture and rural enterprises, local capacity would be built through three types of interventions: (i) the rapid restoration of most urgent services; (ii) the development, in close collaboration with UNMIK, of longer term services related to administration, policy and legal issues such as privatisation, and; (iii) the management of the project as an operational means of providing on-the-job training to local technical and managerial staff.

Rapid Restoration of Most Urgent Public Services

In the short run, it is proposed that the following services be provided with urgent support by the Recovery Programme (see specific working papers for more details):

- Veterinary services should be re-activated as soon as possible, to safeguard animal health. The risk of diseases spreading is real and veterinary services should be strengthened in various ways, with immediate priority being given to financing a vaccination campaign for most of the ruminants during the next autumn and spring. The proposal is being worked out in detail (for an amount of about US\$ 1 million, expected to be financed as a grant by the World Bank). In addition, the 28 veterinary stations (run by 134 private veterinarians) should rapidly be re-equipped and rehabilitated and could be provided with some urgent drugs: this could cost an additional US\$ 0.8 million;
- The Livestock and Animal Health Institute should be rehabilitated and TA provided to restore some diagnostic capacity, which appears indispensable for ensuring the safety of the proposed farm animal import programme;
- Animal quarantine stations need to be set up in selected sites in the province and provided with sufficient shelter, equipment and animal feed. These should be financed prior to any import of animals;

- Seed quality testing facilities in the form of a small laboratory should be put in place to support the massive import of seeds from FAO and NGOs. Although plans have been made for this by FAO, it is not certain that the proposed facilities can be operational before the next sowing season.
- A limited capacity might be set up to identify crop pests and diseases as to advise farmers on suitable control measures
- Institutional arrangements for water management need to be re-established as a matter of urgency and given the necessary means (repair workshops, vehicles, maintenance equipment, TA, etc.) in order to operate and maintain these partly restored systems.
- Some urgent rehabilitation works should be undertaken on the irrigation schemes so that they are restored to at least partial functionality before the next irrigation season starting in spring 2000. This would include the repair of war-damaged parts of the schemes (very limited sections), cleaning of the more important parts of the schemes (deferred maintenance), replacement of parts of structures which have been vandalised (hydrants, valves) and rehabilitation of some priority pumps. Other urgent measures are described in WP4.
- The problem of ensuring fuelwood supplies without excessively damaging the forest resources needs to be tackled as a matter of urgency. The estimated demand of 2 million m³ per year is more than the forest can sustain. The immediate requirement is to create an institutional capacity for the identification of safe accessible areas, formulation of simple management plans and the organisation of harvesting activities through local contractors or family permits. In addition, alternatives to wood for heating should be quickly investigated as well as mechanisms to favour their use by the rural population.

Building Up Longer Term Administration and Policies

In addition, the programme should support in the long term the reactivation of essential public services for agriculture in close collaboration with UNMIK and the future administration of agriculture and rural areas. They include:

- Some form of light and sustainable advisory services should be established with the aim of providing farmers with the technical means to reverse the negative trend of crop and livestock performance.
- A forest management capacity should be developed as soon as next year in order to update forest inventories, draw up management plans and prepare planting programmes. This will require to work in close collaboration with UNMIK with the aim of upgrading both the human and logistic assets of the forest organisations;
- The full rehabilitation of major irrigation schemes would have to be subject to prior careful technical feasibility studies and economic analysis of the viability of

the investment. These schemes have operated at very low capacity over the last 10 years and the extent to which they should be rehabilitated (beyond the emergency measures recommended above) will be conditioned by the demonstration of their economic viability. In the meantime, early attention should be given to formal establishment and consolidation of sustainable institutional arrangements for irrigation schemes management.

- Legal assistance will be greatly needed, particularly with regard to the privatisation process of Agro-Kosovo.
- A rural finance system which would attract savings and provide loans for agriculture and other rural businesses will have to be established.
- Assistance in the formulation of longer term agricultural and rural development policies will also be valuable to the future Government structure, once it has been constituted and recognised by the international community.

Organisation of the Programme Management and On-the Job Training

A management team for preparing and implementing the agricultural reconstruction programme should be established as soon as possible in Pristina to work out concrete implementation arrangements for investment in agriculture. This is especially needed in this particular context where there is no recognised official Government which could assume responsibility for local preparation of projects. Subject to donor agreement, this team should be appointed in collaboration with UNMIK and staffed with a blend of international and local staff. This team would be attached to the agricultural arm of UNMIK in the same way as in most countries similar project implementation units are attached to the ministries of agriculture.

This team would: (i) prepare detailed design and implementation arrangements for the programme; (ii) coordinate and supervise subsidiary units in charge of specific project components (see below); (iii) keep the consolidated accounts of all activities; (iv) manage a pool of clerks, interpreters, secretaries, drivers and cars to be used by the other units; (v) recruit when necessary specialised short term international and local specialists; (vi) monitor the programme (evaluation possibly being delegated to an independent body); (vii) liaise with donors and UNMIK, and (viii) liaise and coordinate efforts of NGOs involved in the agricultural sector recovery process. The staffing of the team would evolve according to needs but would include a programme manager, an accountant, a M&E specialist, clerks, interpreters, drivers, etc.

In addition, possibly three separate units (responsible for the three pillars) should be established. The principle behind this would be that these units would manage and implement specific parts of the programme in a coherent manner regardless of the source of funds. Instead of creating separate project units to manage their own programmes, the donors would be encouraged to pledge funds to the overall programme and contribute either with funds or expertise to the functioning of the above-mentioned units. A tentative cost of these implementation arrangements could be about US\$ 6.0 million, including one third by the end of 1999 and the remaining two-thirds by the end of 2000. This represents 3% of the estimated cost of the programme, estimated at US\$ 200 million (see below) which they would manage during that period. Although this might appear relatively

expensive, it is essential to ensure that there is a competent and skilled management capacity in place, in particular in the absence of a formal Government. These units should be formed of combinations of international and local experts, i.e. a pair of experts for one position. **This is also to be considered as part of the training efforts of the programme to build up the local capacity which is vital as a result of 10 years of absence of technical work and formal training for most of the staff.**

The unit in charge of “pillar 3” (agricultural services, legal and policy aspects of the programme) could initially be formed of (not necessarily on a full time basis): (i) one manager; (ii) one legal adviser; (iii) one veterinarian; (iv) one agriculturist to look into critical crop protection, seed control services, and; (v) one agricultural policy specialist. This unit would need to work in very close collaboration with the agricultural arm of UNMIK. The managerial arrangements for the two other pillars are detailed below.

Management of the “Social Pillar”

Based on the experience of Bosnia and Herzegovina, the **social pillar management unit** could include: (i) one livestock specialist; (ii) one farm machinery specialist; (iii) one rural sociologist to work out project beneficiary selection and targeting arrangements (see below); (iv) one procurement specialist which would work, in collaboration with the above technical specialists, the technical specifications and the procurement arrangements which fit with local needs and comply with donor requirements. In addition local staff should be appointed at district in charge of liaising with villages and final beneficiaries. The Terms of reference would be worked out in detail in September and could easily be based on the experience in Bosnia with the necessary modifications and adaptations to the local context.

Indeed, many lessons will be drawn from the experience in Bosnia and Herzegovina. In view of the rich experience gained in Bosnia and Herzegovina, a visit by concerned Kosovars should be paid to the Project Implementation Unit in Sarajevo in order to be advised on the best ways to proceed quickly and efficiently and with the purpose of avoiding same difficulties or repeating the same mistakes.⁴⁵

The advantage of having the three teams in charge of the three pillars under the same team would be an enhanced coordination. For instance, the implementation of distribution of animals should be coordinated with the support to veterinary services (pillar).

With regard to the potential distribution of animal feed, the experience of Mercy Corp International would be very valuable in planning and implementing the proposed activity. Also, the logistical system established by WFP (in collaboration with NGOs and the Mother Teresa network) to distribute food aid could also be used to distribute animal feed at the same time without excessive incremental cost.

Management of the Rural Recovery Fund

One has to distinguish the need to technically and financially assist the entrepreneurs in obtaining loans and the need to have an independent functional financial unit to manage the fund. For the first need, a small unit would be part of the programme management team to help enterprises in

⁴⁵ This also applies to the importation of farm machinery.

preparing business plans, evaluating market possibilities and investment options in this new situation and assist them in accessing credit and grant funds. This unit should be relatively small and made of local and international staff competent in technical matters and financial analysis.

Regarding the second need, there is currently no functioning commercial bank in Kosovo. The economic pillar of UNMIK, being implemented in collaboration with IMF and the World Bank, recognises that one of the first priorities is to « develop intermediation functions for channelling donor-funded credit lines, donor local cost financing of projects, and provision of small scale banking services to the donor and local population »⁴⁶. It is proposed, therefore that an intermediation entity should be created with the agreement of UNMIK and under procedures to be worked out with the support of IMF and the WB to serve as manager of the Rural Recovery Fund, with the understanding that it could become the embryo of a rural or SME bank. The entity should be established quickly, remain small in size and operate as an independent unit.

It would: (i) inform potential enterprises (clients) on the possibilities to access the Recovery Fund and conditions for application and approval; (ii) screen the applications (simplified business plans) from clients on the basis of the technical feasibility, financial viability and availability of markets for the products/services of the applicants; (iii) verify in the field some of the key assumptions behind the business plan, in particular the present condition of the enterprise, the extent and nature of damage, the proposed guarantees and collateral and the reputation of the applicant; (iv) sign loan agreements with the borrowers and; (v) channel both loans and grants from the Fund financed by donors for disbursement to clients through the 6 payment offices that UNMIK is in the process of establishing in the province with the protection of KFOR⁴⁷. The entity would also be responsible for supervision, performance monitoring and securing loan recoveries in line with financing plan projections.

This entity should at least initially **be formed of a mix of international and local staff**: each position could be occupied by one international plus one or two local in order to prepare the future transfer of the unit to local employees by providing on-the-job training. The positions could include: (i) one agriculturist to review the technical aspects of proposals related to primary production and agricultural services; (ii) one agro-industry specialist to analyse the projects of restarting or developing agro-processing enterprises; (iii) one or two financial analyst / credit specialist to review the financial aspects and prepare financing plans; (iv) one or two accountants / cashiers to manage funds and keep appropriate records, and; (v) a procurement person to help, when necessary, the loaners in finding their necessary inputs.

Now that these organisational needs have been identified in the form of an entity, the main issue will be to decide on who is going to cover these needs, i.e. to be this entity. **The main challenge will be to combine two objectives: address urgent financial requirements of rural enterprises and businesses and support from the beginning sound and sustainable financial institutions.** There are several options, of which the following ones:

- To support the reviving of the Bank of Kosovo which was owned by Kosovars but closed in 1990. These shareholders intend to quickly re-activate the bank and some

⁴⁶ Update on Economic Policy Issues and Institutional Development. Statement of IMF and World Bank Staff at the Informal Donor Meeting for Kosovo, Brussels, July 28, 1999.

⁴⁷ Indeed, UNMIK, IMF and the WB recognise that in a first phase, all transactions will be cash ones.

of the key previous employees are available to work again. The bank estimates that its assets are worth about DM 100 million, including 27,000 m² of buildings. Although the actual value of these assets might be lower (very little cash bought, depleted and partly damaged buildings) one could imagine that the bank could be re-capitalised and quickly re-opened. However, several issues need to be addressed such as its ownership (as previous shareholders were mainly from the social sector) and the upgrading of the staff who were out of the bank's employment during the last 9 years of interruption.

- To support the establishment of a new local financial institution such as an NGO (saving and credit association), a company or simply a new bank owned by private entrepreneurs which want to become active in the formal financial sector. This would solve the problem of ownership. However, before this can be done, the procedures of registration should be in place and efficient, which is not yet the case.
- To establish with the agreement of UNMIK and under procedures worked out with the support of IMF and the WB a transitory and independent ad-hoc entity which would quickly provide urgent loans (and matching grants). It would act as an embryo of a future rural bank. Its legal status as well as the legal transfer of its assets and outstanding of loans to future formal banks (which could be either the proposed unit transformed into a bank or another bank) should be clarified very soon.
- Finally a pessimistic (or realistic) one would be to assume that the combination of the two objectives (urgently provide funds to be recovered as loans and sustainability of the financial institution), is not possible and that they should be separated. It would be possible to argue on the grounds that the war caused exceptional damages, that most urgent needs should be covered by grants, without any attempt of cost recovery. The unit to implement this grant facility would be similar to the one described in the previous section. Meanwhile, local financial institutions would be established with more time to ensure the soundness of their operations and their sustainability.

In any case, the **first step would be to appoint as soon as possible (hopefully in next September) a small advance unit** (made of two international and two local staff) which would identify potential enterprises, advertise the possibility of benefiting from the future Fund and help the enterprises in preparing business plans to be submitted for approval once the Fund is operational. In addition, this small team should work out more concrete arrangements for the establishment of the independent entity and in particular investigate further the previous options, work out its strategy in terms of managing the funds, allocating credit vs. grants, repayment conditions, necessary guarantees, etc. EBRD has indicated its readiness to mobilise grant funds to finance this first team which terms of reference are annexed to this report for their use. This participation could take place in September in collaboration with FAO, UNMIK and the WB/IMF team in charge of the financial sector. This team should then be complemented and absorbed by the future programme management team.

Targeting and Selection of Beneficiaries

Due to the probable limitation of funds as well as the possibility that better-off farmers will be able to mobilise their own resources to re-invest in new farm assets (from savings or remittances), a selection process of beneficiaries should be established for pillar 1 in particular. Indeed, this social pillar aims at alleviating poverty and therefore would give priority to assisting those who will not have the opportunity to use remittances or who do not have other sources of income.

The distribution of animals and farm equipment should be targeted on the basis of criteria which would include the following three considerations: (i) priority given to most war-affected municipalities, villages and households; (ii) priority given to the poorest families, i.e. those who would have difficulty to find alternatives to project support (e.g. from remittances which will certainly be used by those who have this chance to re-build their farms); (iii) distribute animals or machinery to those who have the ability to take care of and maintain this new asset (experience in the past and availability of appropriate shelter or possibility to repair it if the project provides farmers with minimum construction materials). These selection criteria and the concrete ways to implement them in the field should be further elaborated during the next mission in September (e.g. by a rural sociologist).

Under the Emergency Farm Reconstruction Project in Bosnia and Herzegovina, the governments at Federation, Canton and Municipality level were given the responsibility for the selection of villages and final recipients on the basis of a set of selection and priority criteria. This system however would not be applied in Kosovo for the following three major reasons: (i) there is not yet a recognised government structure in Kosovo; (ii) the application of selection criteria for the selection by local government units was not monitorable because the criteria were too numerous and complicated, and; (iii) the process induced many protests by farmers who were not considered eligible and who considered that the selection was done on political ground.

Instead, and subject to further verifications with regards acceptability and feasibility by a sociologist during preparation / appraisal, the following 3-step mechanism is proposed:

- The selection of villages to benefit from distribution of animals and/or farm equipment on the basis of their needs. A first approximation of their needs would be the percentage of losses of these assets compared with 1997 levels. A minimum

percentage of losses to be eligible could be 20% or 40%: this should be further worked out;

- Distribution of resources among those qualifying villages in proportion to the total funds available and extent of losses. The percentage of losses should be evaluated in an objective manner. For animal losses, this could be done by veterinarians who will be in charge of the vaccination campaigns, as they will have to travel in all villages and identify all surviving animals. In each village, in any case, they would identify numbers of cattle and sheep before the war and the current situation;
- Within the village, the distribution of new assets should preferably be done at village level by taking advantage of the spirit of solidarity which has developed over the last years and especially recent months. A facilitator from the project implementation unit should gather villagers and explain the features of the project, in particular the social pillar (number and types of livestock and farm machinery available) and economic pillar (possibilities of getting a credit with possible matching grants). He/she should also explain the spirit of the social pillar and in particular the selection criteria as well as the cost recovery arrangements in kind (see below) for those receiving the assets. But then the selection process would be undertaken by villagers who would decide who would receive what. This appears to be one of the only possibilities in the absence of a recognised administration structure⁴⁸. In any case, these procedures should be discussed prior to project implementation to verify their feasibility and acceptability by villages.

The **Mother Teresa Society (MTS)** is the most important non-governmental organisation in rural areas. It has been very active during recent years in providing social support to poor areas and needy families. Its network is impressive and includes 42 branches in all municipalities with 636 subdivisions at villages. It claims to assist about 29,600 families, or 193,000 people in total. The MTS is very well accepted and welcome in Albanian ethnic villages (both Christian and Moslim) as it support them in alleviating poverty through social programmes and also linking local needs with external assistance. MTS is well respected and it seems that thanks to the structure of the traditional society in the rural areas, the organisation would not be abused so that its assistance would only be requested in case of real need.

The MTS could play a major role in implementing this programme and in particular in the targeting and selection of beneficiaries as well as the organisation of cost recovery mechanisms such as those proposed in the following section. Their real capacity in implementing these features of the programme as well as the necessary support to their operations⁴⁹ should be investigated during the next preparation mission. In addition, alternative organisations should be identified (such as the

⁴⁸ Another possibility would be to distribute coupons of the same value to all farmers. With grouping some of those coupons (by purchasing them or borrowing them from other farmers), a farmer could receive a particular piece of equipment or animal. However, constraints to this system are numerous: despite it appears equitable, it is not necessarily fair to allocate same resources to farmers who have lost everything and those having only suffered from little damage; there can be little control on the further exchange of coupons which could end up concentrated in most powerful hands (which would contradict the poverty alleviation objective of the exercise) or even be subject to issuance of fake coupons.

⁴⁹ The MTS is reported to become frustrated in some cases as it is used by many organisations (including UN institutions and NGOs) without any support to their local staff.

Orthodox Church) in villages inhabited by Serb or Rom households and where the MTS is not acceptable.

With regards other pillars, no particular targeting mechanism would be necessary. The access to the Rural Recovery Fund would be on the basis of the quality, feasibility and viability of the proposals submitted to the entity in charge of managing the fund.

VIII. Costs Estimates and Cost Recovery

The following Table is only indicative of the scope of what could cost the programme. Within the global scope of about US\$ 200 million, the balance between pillars might change substantially as a result of further investigations. The figures will be further refined during following stage of preparation.

Pillar / Activity	Indicative Cost (US\$ million)	Disbursement Period	Cost Recovery
Social Pillar - Supply of Animal Feed - Supply of Animals - Supply of Farm Equipment for Spring - Same for Autumn Sub-total	6.0 20.0 47.0 27.0 100.0	Sep. 99- April 2000 April- Sep. 2000 Jan-April 2000 May- Sep 2000	0% Partial in kind or in services at village level
Economic Pillar - Loans (60%) - Grants (40%) Sub-total	30.0 20.0 50.0	First tranche (US\$ 10 million) from Sept 1999 to Spring 2000; second tranche (US\$ 40 m.) after.	100% 0% 60%
Public Services and Capacity Building Pillar - Urgent animal and crop protection Services - Urgent Repair on Irrigation/Water mgt - Rehabilitation of Irrigation Schemes - Forest Management - TA for Legal, privatisation, Policy Issues - Other Services - Emergency Management Structure - Full Implementation of Programme Sub-total	6.0 8.0 20.0 5.0 5.0 6.0 2.0 4.0 56.0	Aut. 99 / Spring 2000 Before Spring 2000 2000 and thereafter From Autumn 1999 2000 and after 1999 and 2000 Until End of 1999 2000	0% 0% Partial (w. fees) 0% 0% 0% 0% 0%
Approximate Total Cost	206.0		About 40%: 15% in cash 25% at village level

Various approaches to financing the programme could be considered. One which would have the advantage of providing much needed flexibility and contribute to well orchestrated programme management arrangements, would be for the EU/WB task force to invite pledges from donors of resources which would be committed to the overall programme. Another option would be for donors to be requested to sponsor particular components of the programme including, in this case, the assumption of full responsibility for funding preparation (in collaboration with the programme implementation unit) and for covering the required technical input and finance.

The loan element of the rural recovery fund should be 100% **recovered** and re-invested in a revolving line of credit. With regard to the supply of animals and farm machinery, the experience in Bosnia and Herzegovina shows that it does not appear realistic to expect recipients to pay back in cash over a certain period of time, especially in the current situation where there is no banking system. Instead, innovative cost recovery could be established taking advantage of the social structure at village level. Unlike in Bosnia and Herzegovina, the cost recovery would not be enforced by a Government structure but by social pressure with the possible assistance of the Mother Teresa Society and other organisations, for instance in the villages inhabited by Serbs and/or Roms.

These mechanisms could involve a partial recovery in kind to other households of the village as a mean to spread the benefits over a large number of people: for instance, the recipient of a heifer could be asked to provide some of his milk during a certain period to some of his neighbours who did not receive animals. He could also be asked to give or sell at a low price the small animals (calves, lambs) to other farmers from the village. Similarly, the recipients of farm machinery could be asked to provide freely for a certain period, some services to their neighbours such as plowing, transportation, hay cutting, harvest. An informal “contract”, facilitated by the involvement of MTS and other organisations, could be agreed upon at village level between recipient and non-recipients. In view of the apparent solidarity spirit which has developed at village level, these arrangements could certainly prove practical. However, this should be further worked out during the next mission in September.

IX. Outstanding Issues and Follow-Up

At this stage, there are several outstanding issues and uncertainties. For the purpose of addressing them and defining in more detail these preliminary proposals, a mission will be fielded in September and will concentrate on the following:

- specify the types of farm assets to be procured under a first reconstruction project: types of animals to be procured, including species, breeds and age (female, male adults, small ones); work out the technical specifications of the farm machinery;
- quantify needs and availability on the market of farm assets to be distributed. The war damage survey on agriculture will provide useful quantitative information on losses during the war as well as perceived needs. In addition, a rapid market investigation should be undertaken to find out where are the defined items available and in which quantities both in the region (Balkans including Kosovo itself) and in the rest of Europe;
- procuring procedures to be proposed, i.e. mechanisms to quickly bring in these assets while involving and building up the capacity of the local private sector;
- innovative, realistic and acceptable cost recovery mechanisms for the distribution of these assets;
- how to concretise and manage the Rural Recovery Fund. Many issues are related to the fund: status and organisation of the unit in charge of handling the fund (bank, NGO, ad hoc transitory unit, private association of private investors, etc.); legal framework of credit operations (bank legislation, collateral, etc.); loan vs. grant in the fund (balance between both of them, how and on which criteria to allocate grants; how to channel grants to help the recovery process without undermining the credit system, etc). One of the main issues will be to decide whether it is realistic to expect to rapidly enough restore/create a sustainable and efficient credit system which could respond to urgent needs while a viable institution is being established. If not, an option could be finance grants on the short run to respond to urgent needs;
- how to deal with local administration in the absence of an official Government. How to build up the capacity of local staff involved in the agricultural sector without recognising them before a formal Government is approved by the international community;
- ownership of social enterprise and their privatisation, an issue to be examined at province level, across the different sectors. Regarding the agro-kombinat, the

programme could specifically provide assistance in valuation of assets and privatisation process of land;

- coordination of activities in the agricultural and rural sectors between all numerous actors which include donors (EU, the World Bank, bilateral donors, etc.), the many NGOs (they are estimated to be about 180 as of beginning of August 1999), UN organisations, etc. In particular, if a similar intervention is undertaken by various organisations, there should be an agreement in order to have coherent procedures. For instance, cost recovery arrangements should be consistent so as to avoid potential frustrations between villages benefiting from different interventions;
- nature of the relationship and separation of roles between UNMIK and the reconstruction programme in particular with regards pillar 3 of this programme which aims at strengthening local capacity and services.

At this stage, the most important thing is to move very quickly because the situation is evolving rapidly in the ground and needs are huge. A local preparation unit, technically and financially supported by international organisations, should be established as soon as possible to locally undertake design and implementation arrangements. The next phase will be to mount a preparation mission in September to finalise some of the proposals related to the urgent distribution of farm assets, the establishment of the Recovery Fund and re-activation of most critical services. This mission will be carried out in conjunction with a WB appraisal mission for a first farm reconstruction project which could cover part of the first pillar. In addition, EBRD would be involved in supporting (by providing grants and its experience on assisting private enterprises) in the establishment of the Recovery Fund. A proposal is being prepared for EBRD to finance the sending of a small team in September to work in close linkage with our mission. Similarly, this report will be submitted to the EU which, together with the World Bank, is taking the leading role in financing reconstruction programmes. More concrete proposals will be completed before the next Donor Conference scheduled for October this year.

KOSOVO

PROGRAMME FOR RECONSTRUCTION OF RURAL ECONOMY

WORKING PAPER 1

LIVESTOCK AND ANIMAL HEALTH SERVICES

Working Paper 1
Livestock and Animal Health Services

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Working Paper 1
Livestock and Animal Health Services
A. Introduction

A mission⁵⁰ from the FAO Investment Centre and the World Bank (WB) visited Kosovo from 11 to 21 July 1999 to prepare a report on Damage Assessment of the Agricultural Sector. This report is that of the livestock and animal health consultant. In the absence of an agricultural administration, Mr O.T. Heselius, of Mercy Corps International arranged initial introductory meetings with the one identifiable provincial institution, the Agricultural Faculty of the University of Pristina. A travel schedule had also been arranged, to which flight delays, time and security did not allow complete adherence. Professor Xhevat Domi, of the Veterinary Department of the Agricultural Faculty, was assigned as counterpart to the consultant. Field visits were made to Kacekoll, Suhareke, Prizren, Ferizaj, Gjakove and Fushe-Kosove during which meetings were held with local veterinarians, animal agriculturalists, returning refugees, farmers and herdsman. Meetings of the FAO/TCOR coordinator, NGOs and the inaugural meeting of the Association of Veterinarians of Kosovo were attended and addressed.

The consultant would like to record appreciation to all persons who afforded their time and experience, often under distressing circumstances, and particularly to Professor Xhevat Domi, who guided the consultant throughout the mission, and whose advice and assistance has been invaluable.

As this report is intended to contribute to a larger report it is presented in as concise a form as possible. In particular the background section to the animal agriculture of Kosovo is intended as a brief summary; more informed details are available in documents provided to the consultant but which themselves are very dated. Greater attention is given to observations and findings, many of which are essentially subjective due to the absence of data and to the very disrupted post war situation. This leads to a number of proposals for the conservation of the remaining base of the livestock sector. Attempts at costings must be considered as very preliminary due to the absence of data on where such inputs are likely to be sourced, the funds and methods likely to be used for their procurement, import and distribution. The experiences gained in Bosnia and Herzegovina are drawn upon to try and avoid some of the difficulties and mistakes which were encountered there.

B. Background

The most recent livestock statistics available of the FYR (1989) indicate the following domestic animal populations in Kosovo province: 405,038 cattle (including buffalo), 407,062 sheep, 62,202 pigs, 27,314 goats and 4.5 million poultry. Subsequent estimations concur with these figures, with the possible exception of those for poultry which were largely maintained on state Kombinats and which have been progressively reduced throughout the 1990's.

Livestock production systems may be divided into three categories:

- (i) **Small household farms with an average of 3.1 ha.** With average livestock holdings of 1.4 cattle, 2.6 sheep and 12.7 poultry on approximately 100,000 small farms. These averages represent the cattle situation fairly accurately, as typically each rural household would aim to have a house cow for the production of milk for domestic consumption. In the case of sheep fewer households kept sheep and typical flocks ranging from 20 to 70 head are

⁵⁰ Messrs. Benoist Veillerette (FAO Leader), Christy Cronberg (Agro-industries), Ms. Vilma Horinkova (Water Management), Anthony Zagni (Irrigation), Luc Dubreuil (Forestry), Lawrence Clarke (Agricultural Mechanisation), Severin Kooderitzsch (World Bank) and Ibrahim Hajcaj (WB Tirana) and Nicholas Buck (Livestock and Animal Health).

described, some owners having flocks of as many as 200 sheep. The limited grazing area reflected in farm size was augmented by the grazing of road side verges, arable stubbles and stovers, and particularly with sheep by transhumance to upland pastures in the summer. Cattle are housed for approximately five months of the year (November - end March) during which time they are fed on hay and straw, with little supplementary feeding. Livestock production levels are low and in most cases this system in which the vast majority of livestock were held, would have been part-time farming with income also coming from off farm earnings.

- (ii) **Small commercial mini farms** have developed over the past twenty years and have been the object of past WB investment. Mostly this was directed at dairy and poultry farms of some 10-12 milking cows and units of 2,000 and more laying hens. The statistics available do not allow estimation of the numbers of stock on these farms nor was it possible to determine how many farms there were. Land areas seem to have been similar to those of the household farms but the larger number of cattle were supported by growing of lucerne, by the purchase of hay and of concentrate rations. Poultry were, of course, entirely dependent on purchased feed and replacement stock purchase from the state hatchery and more recently from further afield. Serb and Catholic Albanian farmers were the predominant pig keepers.
- (iii) **Large scale livestock production** was conducted at kombinats (socially-own farms). While these were insignificant in terms of the numbers of ruminant livestock kept, they were the foci of improved cattle and sheep in the past and important centres for milk production for urban centres. Poultry, and to a lesser extent pig production were also important activities. Kombinats also provided the feed production, slaughter house and milk processing infrastructure. All kombinats suffered declines during the past decade with livestock being removed to Serbia and increasing import of animal products from outside of the province. As background Table 1 describes the location and activities of the kombinats. The damage to agro-industries is described in Working Paper 3. Major slaughtering facilities existed at Fushe-Kosove Kosove and Prizren, poultry processing at Gjilan and Gllgovc, and industrial dairy plants at Fushe-Kosove and Prizren. Feed manufacturing plants were located at Fushe Kosove and Kline. It is anticipated that the majority of the meat and milk processing plants are now in poor or unserviceable condition. Access was not allowed to the Fushe Kosove feed plant which is located in a Serb community .

Livestock Breeds and Productivity before the War (during 1990s)

Cattle. The indigenous breed of cattle is the Busha, which was remaining in some numbers but had been much influenced by the use of Brown Swiss and Simmental genes through artificial insemination (AI) and the use of grade bulls. All cattle were smaller than representatives of the same breeds in Western Europe from a process of adaptation to the local environment, with mature cow weight probably not exceeding 420-450 kg liveweight. Milk yields were low at about 1,500 litres/cow per year. With the difficulty of maintaining young stock on smallholdings both male and female calves were sold at low weights for veal, this being one of the reasons for establishing kombinat fattening stations. The adoption of AI has been slow with difficulties of communications and most cattle were bred by natural service by unselected bulls. Cows were commonly bred in the summer after calving in the spring, and after recovery of body condition at summer grazing. No

productivity data are available for Buffalo but their appearance suggests that they are well adapted to the environment. Cattle were not used for draught purposes.

Table 1. Kombinats Involved in Livestock Production

Activity	Location	Name	Numbers	Notes
Dairy production	Istog	Dobrava	1,000	All dairy farms had
	Miradir (Fushe Kosove)		1,100	Holstein Friesians.
	Prizren	Progress	1,200	All now defunct
Beef fattening	Istog		na.	All now defunct
	Glogovc		2,500	ditto
	Prizren		3,000	ditto
Sheep breeding	Dragash		5,000	800 remaining
	Ferizaj		3,000	
Pigs	Fushe-Kosove		5,000	Breeding & fattening
	Istog		2,500	
Poultry	Gjilan			Poultry hatchery, 90,000 parent broilers, 10 m annually capacity condition unknown
	Gjakove	Eriniko	200,000	Egg production
	Gjilan		240,000	Broiler production
	Lipjan	Coop. Kosove	400,000	Turkey production
				Egg Production
	Kamenica	Rupatova		Broiler production

Sheep and goats. Indigenous sheep breeds are the Shar Pramenka and the Bardhoka, common in the south and west of the country respectively. Both are dual purpose breeds and whilst milk yields of 70kg are claimed for Shar Pramenka and crossbred sheep, the Bardhoka has a reputation as a good milker with yields up to 200kg. Lambs were slaughtered at low weights of 30 kg live body weight for the domestic market and for export to Greece. Lambing occurs in the months of December and January when sheep are still partially housed and lambs would mostly be killed before moving to hill pastures. There is widespread evidence of the use of the Wirtenberg (a Merino type breed) to improve the local breeds particularly for wool production. Wool clip is low (2-3kg greasy wool). The goat population was small, as was common throughout FYR, and goats were run with sheep flocks. Anecdotal evidence describes disappointing experience with the import of Saanen and Alpine goat breeds.

Pigs and poultry. Pigs on the kombinats and on mini farms were Landrace and Large White types. Various poultry breed influences may be recognised in backyard poultry; on commercial production farms hybrids were used for egg and meat production, with production levels of 280 eggs/hen per year being reported.

Horses. The horse population was small and they were used for haulage transport, but not in recent years for ploughing.

Animal Health and Veterinary Services

Animal Disease Situation

It may be assumed that the animal health situation in Kosovo prior to 1991 was comparable with the rest of the FYR, with control programmes for bovine brucellosis, tuberculosis and leucosis in cattle. Meat and milk hygiene was also at a high level with industrial milk processing and meat inspection. Due to deteriorating economic conditions and the development of informal marketing over the past eight years, it is to be expected that this will have declined. During this period ethnic Albanian veterinarians were progressively displaced from positions of responsibility and records of disease incidence are not available. It is reported that anthrax and the clostridial diseases of ruminants have increased due to lack of vaccination cover; similarly with rabies in dogs and potentially with classical swine fever of pigs. Q fever was not officially recognised, but anecdotal evidence suggested that it was in the past responsible for high mortality in imported goats, and causes cases of human sickness. In view of the experience of goat importations to Bosnia and Herzegovina (B&H) under the Emergency Farm Reconstruction Programme in 1996, it is essential that the status of this disease in Kosovo should be established by serological sampling of the local population before goat and sheep importations are considered.

Brucellosis (*Brucella melitensis*) of sheep and goats is suspected. This is an important zoonosis and is claimed to be responsible for widespread sickness in rural households from the consumption of un-pasteurised milk and milk products. It has not been possible to establish the control measures adopted on state sheep farms in the past, but with universal private ownership, and with the absence of funds for compensation, control by serological testing and slaughter of reactors will be impractical and unsuccessful. Veterinarians report an outbreak of Foot and Mouth Disease (FMD) which occurred in 1996. It is claimed that this disease was only diagnosed clinically and that cattle were slaughtered without compensation, causing considerable distress to the Albanian farmers. Of the infectious diseases of poultry, Newcastle disease is said to cause annual mortality of backyard flocks. In the past commercial flocks were subject to the regular vaccinations for Newcastle Disease, Gumboro and the respiratory diseases of fowl.

The production limiting diseases such as fascioliasis and helminthiasis contribute to low production levels in sheep and cattle. The poor nutrition on the majority of privately owned farms is additionally responsible for poor growth rates and low milk production.

Animal Production and Health Services: Infrastructure and Personnel

Information on the organisation of animal production and health services in the past have been difficult to obtain. Most information has been obtained from Albanian personnel and who have now returned to their local veterinary station. There are 29 municipalities in Kosovo, 28 of which have veterinary stations. These facilities provide office, storage, animal handling facilities and were sometimes combined with living accommodation. Their size varies considerably. These premises were equipped with basic diagnostic equipment (microscope, slides, stains, etc), refrigerator, veterinary instruments and in most cases equipped for AI services for cattle. In Pristina there was a Livestock and Veterinary Institute with nutrition and veterinary diagnostic laboratory. The capabilities of this laboratory must have been limited as judged by its size and most material, for other than basic diagnosis, would have been referred.

The establishment and deployment of staff manning the station and laboratory has not been determined. In common with findings in Bosnia and Herzegovina it is probable that the services provided would be for meat and milk hygiene at local facilities, control of the prescribed diseases, technical support to Kombinats and clinical attention to private farmers.

C. Qualitative Damage Assessment

General

Due to the relatively short duration of the most acute period of hostilities the majority of refugees forced into Albania and Macedonia have now returned to villages, farms and towns. Despite the widespread destruction of houses and the priority demand that this presents to families, there is great farming activity addressed at conserving hay and harvesting the wheat crop. Tractors are currently mostly used to transport people, construction material and hay. This spirit of determination in adversity is an encouraging aspect of post war Kosovo. The decade of discrimination against the Kosovar people has also developed a self reliant attitude. As goods and services were progressively denied, private initiative alternatives developed to replace them. Most of these developments have been vindictively destroyed, but many advances were made to the mission to assist in their recovery. Typical of such enterprises is the “Ajka” Dairy Factory at Kacekolle where a small private dairy plant used to receive milk from 125 producers delivering 3,000 litres of milk daily. This was processed to pasteurised milk and a range of other dairy products for the Pristina market. This, in common with numerous small commercial poultry units, was destroyed by retreating forces. The major request from such entrepreneurs is an available source of credit for investment and operating costs. Similarly clinical veterinary services have been provided on a private basis and care must be observed to ensure their recovery, without undermining by injudicious grant assistance.

Livestock Losses and Condition

Livestock losses are attributed to theft and removal to Serbia, slaughter for emergency consumption or maliciously, straying and in the case of pigs and poultry from starvation. There is no way to presently quantify these losses. Livestock that strayed after being left to wander by refugees are still being recovered. Interviews with farmers indicate that where they had four cattle they now have found only one. These claims may be exaggerated, but certainly the numbers of ruminant livestock seen were minimal. The opportunity was taken to present a questionnaire to 53 veterinarians from 17 of the 29 municipalities of the province, when they attended an inaugural meeting of an association of Kosovo veterinarians (the questionnaire is presented as Appendix 1). Based on their experience, and all have been involved in mostly private practice, their estimations of percentage losses of the four farm species by municipality are presented in Table 2.

Table 2. Estimated Livestock Losses % by Species in 17 communes, Kosovo

Province	Cattle	Sheep/goats	Pigs	Horses/donkeys
Decan	80	90	100	50
Dragash	20-30	20-30	n.a.	30
Gjakove	70	80	70	50
Gjilan	60	60	n.a.	50
Gllogovc	n.a.	n.a.	n.a.	n.a.
Istog	70	90	40	70
Kamenica	n.a.	n.a.	n.a.	n.a.
Kline	90	70	90	80
Lipjan	60	60	n.a.	n.a.
Mitrovic	87	87	87	87
Pej	85	90	100	70
Podujeve	60	80	100	70

Pristina	80	90	80	80
Prizren	30	40	n.a.	n.a.
Rahovec	n.a.	n.a.	n.a.	n.a.
Skenderaj	n.a.	n.a.	n.a.	n.a.
Suhareke	50	50	n.a.	n.a.
Vushtrri	90	90	90	90
Approximate average	53	64	74	58

Although the above estimates cannot be considered objective, they are based on the observations of a number of local veterinarians, who have lived in their practice area for considerable periods. It is noteworthy that Prizren returns the lowest percentage losses and a visit to that area revealed that the town had not been damaged by time of the peace agreement. From these estimates the claim that 53% of cattle and possibly 64% of sheep have been lost does not seem unrealistic. Pig losses reaching 74% are consistent with the requirement for concentrate feed, which has not been available for six months. It should be noted that no observations have been made for the four communes in the north of Mitrovic where there is a higher proportion of Serb farmers dominated. Livestock numbers may yet be furthered reduced as owners find it necessary to sell to buy building materials for house repairs.

Livestock condition is currently good. This is due to a good rainfall year to date; grazing is abundant; grazing pressure reduced and abandoned ruminants will have been grazing many areas of arable crops. It may be expected that ruminant livestock condition will continue to improve for the remainder of the grazing year. Cattle body condition should ensure that a high percentage will re-conceive, if bulls for natural service are available. It is impossible to estimate bull survival. Natural service is the most common method, with owners paying the owner for service. With communications disrupted AI cannot be expected to make more than a very small contribution. This is now also the appropriate time for sheep breeding and in the limited number of flocks inspected, ram numbers were adequate.

Winter Feed Conservation

Field activity shows that farmers are very conscious of the necessity of hay and roughage for winter feed. Certain areas are precluded by mines and the loss of tractors and conflicting demands for the grain harvest may limit the quantity which can be made. Quality will of necessity be poor, but the conservation of quality winter feed by household farms has never been good. Silage making was more a feature of the kombinats and some mini farms. This situation must be monitored for the rest of the summer months, aiming to identify areas where there may be deficits and those with surpluses, which could possibly be transported to the worse affected areas if required. The recovery of commercial poultry and pig production is dependent on re-establishing the supply lines for balanced feed. This is available in Macedonia. The current difficulties are for payment for both feed and transport.

Animal Health

It must be appreciated that, having only just returned as refugees or having been displaced, veterinarians cannot be expected to be fully appraised of the animal health position (this mission visited Kosovo only four weeks after the conclusion of the peace agreement). Given the geographical location of Kosovo and the disease status of neighbouring countries, there appears no

reason to anticipate any post war major livestock epidemic. The control of zoonoses is of concern. There is little that can be done in the immediate time to restore meat and milk hygiene capability. Successful control programmes for brucellosis (cattle and small ruminants), bovine tuberculosis and leucosis, can only be planned after the restoration of stability, epidemiological survey and adequate resources for testing and owner compensation. Publicity campaigns by poster and radio advising on the necessity of boiling milk and thoroughly cooking meat are more appropriate at this moment. No cases of suspected rabies have yet been reported, but with the number of stray dogs and lack of vaccination this presents a risk. Disease surveillance and an established reporting system is of early priority.

Of the endemic diseases consistent reports of malignant oedema was the only common factor. In sheep fascioliasis is considered a greater threat, than round worm infestation. This is logical in that there are now few lambs as most have been killed or sold. It would not be normal practice to dose adult sheep at this time of the year, whether a pre-lambing worm treatment was regularly given to ewes was not established. Rural production systems are extensive in the summer, but housing in insanitary accommodation in the winter months presents risks of mastitis, pneumonia and enteric disease. An NGO, the World Society for the Protection of Animals (WSPA), has acted with alacrity and distributed a comprehensive supply of therapeutic drugs to 18 veterinary stations.

Animal Health Infrastructure, Organisation and Capabilities

As indicated above, Albanian livestock scientists and veterinarians have been denied employment opportunity in the public sector for the past decade. The one identifiable institution is the Agricultural College, with very limited numbers of staff and poor facilities. This organisation provides the one contact with the professional expertise at present. Field veterinarians and livestock technicians have now returned to their former places of employment and have been joined by colleagues who were never in the public service. This is commendable and demonstrates a great desire to re-establish a service to the community. The survey conducted at a meeting of veterinarians mentioned above, was used to also obtain quick details of damages and requirements at the locations represented. A table of findings is provided as Appendix 1, Table 1. In summary the findings are described below.

The numbers of veterinarians have been reported as 134. There is no way of telling the numbers who have been killed or will not return. Fifty three attended the meeting the majority able bodied and fit to work. Some had previously been in public service and most had been engaged in private work recently. The number with post graduate training is expected to be small and few will have administrative experience. A conservative estimate would suggest that the province has approximately 80 veterinarians with good clinical skills, but whom will require some retraining for specialised posts. Of the fifty five technicians, qualifications and skill will vary. In common with the practice in FYR, some of these personnel may have tertiary education in subjects such as animal nutrition, animal breeding, husbandry and laboratory specialisation. This remains to be ascertained.

Of the 18 veterinary stations represented, 50% are described as destroyed. All will require some refurbishment, possibly electrical re-wiring and decoration to provide working accommodation. For the animal health work that will be necessary in the immediate future much can be accomplished from limited accommodation, and rebuilding programmes take lower priority than providing equipment. Veterinary equipment, including syringes, needles, diagnostic and surgical instruments are all absent or in poor supply. Ten stations report possession of AI equipment. This consists of 14 or 21 litre field flasks for LN storage of semen and a number of pistollettes. Semen

supply can be considered non-existent due to lack of LN. Immediate requirements of therapeutic drugs has been resolved by the response of WSPA; only four stations indicated lack of supplies and reserves are understood to be available at the University. The situation should continue to be monitored. Vehicles may be considered unavailable. Veterinarians are re-acting by requesting farmers to provide a vehicle for attendance to clinical cases or using private vehicles on a private basis. Responses for priority actions emphasised vaccinations. This may be a veterinary prejudice; when questioned in more detail there is common concern about local sporadic mortality believed to be malignant oedema.

D. Recommendations and Proposals for Reconstruction

General

A constraint recognised by UNMIK is the absence of an administrative and institutional structure. For the agricultural sector this is to be addressed by FAO Mission with the appointment of key technical advisers. This mission will be crucial in the identification and appointment of an administrative structure responsible for the control and regulation of the sector. An early policy decision on the delivery of public sector goods and services must be made. Cost recovery will be difficult in many areas, but should be advocated in all areas where a private benefit is conferred. This will allow further use of resources for continuing development. Unlike the situation in many countries with a past centralised economy, the discrimination against Albanian Kosovars has developed a spirit of entrepreneurial capability. This will facilitate recovery as many have experience in running small businesses, including farms and livestock service enterprises. A key requirement to address many of the recovery issues is a source of credit and a small unit to assist in business planning, provide technical specifications and procurement. The specific proposals made below defined as emergency (to be implemented for the coming winter) or short term, and are aimed at the conservation of existing livestock populations and their recovery, and at the restoration of animal health services. In the absence of any framework to design detailed project proposals, costings are difficult to calculate. Where costings are provided the basis of their calculation is described.

Emergency Proposals

Ruminant Livestock Conservation (US\$ 6.325 million)

Livestock Feeding (US\$ 5.7 million)

Recovery of the cow and sheep populations is dependent on the prevention of further losses of breeding animals. Their importance as producers of milk and meat to the rural households is obvious. As discussed above farmers are harvesting winter fodder. This will be of low digestibility, poor in energy and protein. It is assumed at this point in time, that adequate hay and stovers will be conserved and available for distribution within the province to badly affected areas. There are many strategies of using cereal by-products, straw chopping which may augment supplies. With livestock losses of 50-60% for cattle and 60-70% for sheep, and targeting feeding at lactating pregnant cows and pregnant sheep, it is estimated that there are 80,000 cows and 100,000 sheep which would benefit from strategic feeding to maintain winter production and prevent further losses. The basis behind the calculation of the cost estimate is laid out in Appendix 2). Alternative strategies using non-protein nitrogen (NPN) blocks may be considered. NPN

provides addition nitrogen to ruminal flora and enhances digestion of low quality roughage. The risk of urea poisoning in cattle is reduced when used in block form as this limits daily intake. Although the technique is unfamiliar in the province the method is simple and could be introduced with extension advice. The system may be used for sheep also both by blocks and as a molasses based lick. NPN blocks and licks have the advantage of reducing transport requirements. Poultry and pig feed is required in much smaller amounts due to the almost total collapse of commercial production. The best strategy for poultry production recovery lies in sources of credit for the commercial sector who have acquire expertise. These may be assisted with the provision of concentrate mixes, providing the necessary protein, minerals and vitamins to mix rations with home produced cereals (maize and animal feed quality wheat may be available from Macedonia and some domestically). Evidence of mills already providing poultry grain of wheat screens and weed seed was seen. Further information is necessary before calculation of poultry feed costs. Mercy Corps International are involved in feed requirement estimations.

Emergency Livestock Vaccination Programme (US\$ 625,000)

Albanian veterinarians emphasise the importance of an emergency vaccination campaign against anthrax and the clostridial diseases. They report unconfirmed evidence sporadic cattle losses which are attributed to malignant oedema. There have been no confirmed cases of anthrax. Veterinarians are familiar with the trivalent inactivated vaccine "Tri-vac" (B. anthracis, Cl. Chauvoei and Cl. Septique) and its use in both cattle and sheep. Sheep would possibly benefit from a wider cover against the other clostridial diseases also, and against pasteurella. A cattle programme of vaccination this fall and in the spring is proposed. For sheep two vaccinations before the lambing time of December/January would be recommended.

The delivery of this vaccination programme would be conducted by the veterinarians on a private basis, which would require them to provide the own local transport after receiving supplies from a central distribution. The mechanisms of this remain to be resolved. Estimates are based on two vaccinations for each species.

Costs

800,000 doses trivalent anthrax/clostridial vaccine @ US\$ 0.50	400,000
Service fees at US\$ 0.25 per head of animals vaccinated	200,000
Multi-dose syringes and needles for teams	25,000
Total	625,000

Short-term Rehabilitation Proposals

Organisation of Animal Health Services

The role of the FAO Mission in Kosovo has been outlined above. In consideration of livestock and animal health services there will be a requirement for an administrative structure to provide planning, regulation and control. The central "secretariat" must contain animal production as well as animal health capability. The size of the country and of the livestock population suggest that the numerical size of this unit should be kept smaller. To what extent this authority needs to be represented at commune level must be determined. Possibly a regional representation may be acceptable. Much of the delivery of services should, be made through the private sector contracted to provide specific services, which may include inspections of livestock and livestock

products, disease control measures and regulation enforcement. Clinical services and artificial insemination would be on a private basis. It is expected that diagnostic support would be provided by the public sector for the immediate future, although some cost recovery may be possible.

Re-equipping Veterinary Stations (US\$ 336,000)

The provision of veterinary equipment to restore functional capability is an early essential and does not need to wait until all stations are repaired. Local initiative will locate temporary storage and working premises. These supplies could feasibly be procured and distributed before the winter. Of priority are basic field diagnostic equipment, syringes and needles, surgical instruments and protective clothing. Provisional estimates are based on the experience of needs in Bosnia and Herzegovina, and by comparison with a limited number of lists prepared by veterinarians in Kosovo. A itemised list of equipment for a station providing the work location for 3 veterinarians is provided as Appendix 3.

Estimated cost for each station is US\$ 12,000, to be supplied to each of 28 stations.

Rehabilitation of Veterinary Stations (US\$ 420,000)

Nine of the 28 veterinary stations are reported to have been completely destroyed. The condition of the remainder is poor and all will require some repair and redecoration to restore working environment. Detailed building survey or the many varying types of structure by a quantity surveyor will be necessary to calculate full costs. These stations will become foci of livestock service provision, accommodating both veterinary and livestock production staff. Provisional cost estimates of rehabilitation of US\$ 15,000 per centre are made.

Provision of Veterinary Drugs, Vaccines and Other Consumables

No estimation is currently provided to the provision of animal health inputs. If private veterinary practice is to develop such inputs make up a major part of business income. Supplies are available in Skopje and there had until recently been one veterinary wholesale business in Pristina. Other than for those supplies need by a state service animal health input supplies may be best provided the private sector with access to credit.

Rehabilitation of the Livestock and Animal Health Institute (US\$ 810,000)

The Livestock and Animal Health Institute was the sole laboratory facility in the province. It also housed the centre for artificial insemination. The building remains but nearly all equipment has been removed, records and furniture destroyed. It is difficult to conceive the province without some confirmatory diagnostic capability although it is unlikely that a comprehensive unit for nutritional analyses and diagnosis can be justified immediately. It is recommended that an immediate technical assistance mission is provided to review the diagnostic capabilities necessary to be provided within the province, to advise on the diagnostic procedure to be adopted, the available capabilities possessed by personnel, and the equipment necessary and training necessary. Technical assistance would encompass nutrition, public health and veterinary diagnostic experience. Depending on the advice of such mission a programme of rehabilitation, equipment selection and ordering, training, equipping and commissioning would follow. A very provisional estimate of US\$ 500,000 is included.

Artificial insemination requirements are more simple to assess. AI has a role to play, but it should not be pursued with dogma. The use of AI had not played a large role in the province and farmers

are still accustomed to obtaining natural service from local bulls. Despite the risks of the spread of venereal disease, nationally good reproductive performance is claimed to have been achieved. Nevertheless an AI service is desirable to improve the genetic composition of the national herd. For the foreseeable future Kosovo will be able to obtain better genetics by importing semen, than it will be possible to produce in the province. This will need central reception and storage of imported semen, a supply of liquid nitrogen, vehicle for distribution to field stations, field flasks and small equipment for field work. Most veterinarians and some technicians claim to be experienced but some re-training may be desirable. AI provides a private benefit to farmers and the development of private delivery of this service must be considered. To restore the service immediately an estimate of US\$ 310,000 is made. Details of these cost are provided in Appendix 4.

Livestock Imports (US\$ 3.52 million)

The regeneration of ruminant livestock populations will inevitably take time. In the case of poultry and pigs with the greater prolificacy of these species population recovery can be rapid. The observations that follow and the recommendations that are made draw heavily of the experiences of post war B&H. Indigenous ruminant livestock are adapted to the disease, nutrition and management system of the local environment. Any translocation is, at least, temporarily followed by increased mortality and performance below that which would be achieved in their native environment. Livestock imports should, ideally be obtained from local sources if possible and should be considered for their immediate benefits to their recipients rather than as making major contributions to short term population regeneration. For the same reasons commercial cattle with average performance are to be preferred to pedigree cattle with superior performance. Cattle imports will, almost certainly, have to be sourced from Western Europe, as the neighbouring countries all have milk production deficits. This was successfully achieved to B&H, although the logistics will be more difficult to Kosovo. Sheep may be available from Macedonia and this should be the first choice if imports of this species are to be made. Although goats have a potential to play in livestock production, the disastrous experiences in B&H suggest that importation of this species should be avoided in a post war environment. The following recommendations are made for all livestock importations:

- (i) Disease status and necessary testing should be made in the country of origin, certified by the official veterinary service of that country and accepted without further testing.
- (ii) Quarantine stations should be prepared, provided with feed and water prior to importation and the quarantine period reduced to the acceptable minimum.
- (iii) After the determination of technical specifications of the livestock, the selection of animals should be delegated to reputable agents in the country of origin and subject to rejection on arrival with independent adjudication if technical specifications are not adhered to.
- (iv) The agent supplying livestock should insure livestock for transport and quarantine period.
- (v) Technical assistance should be engaged to assist with liaison with agents, with Kosovo authorities and quarantine preparation.

- (vi) If livestock are to be distributed as credit in kind, a compulsory insurance should be included in the price to cover loss or injury to protect the beneficiary who should be full appraised of the credit conditions.
- (vii) A system should be established to allow animal health services to be rendered. A visit of both international and local staff involved in this activity to would be very helpful.
- (viii) All beneficiaries should be selected on (among other criteria) their satisfactory past experience of livestock husbandry, availability of satisfactory livestock housing and of feed. This provision may exclude some potential beneficiaries but is essential on animal welfare grounds.

Cattle imports of the Brown Swiss (Montefon), Simmental and HolsteinFriesian breeds have been suggested by farmers and livestock opinion. Of these the Brown Swiss would be the most favoured, with Holstein Friesians directed to commercial farmers rather than households. To this could be added representation of the Jersey breed. Jerseys are popular and well represented in Albania. They have the advantage of a small bodyweight, perform well in warmer climates and produce milk of high fat content. Identified sources of Jersey cattle are the United Kingdom (subject to lifting of the current export restrictions) and Denmark, although in all countries they are a minority breed. The number of cattle to be imported will depend on the availability of quarantine accommodation and funds. Based on prices paid for cattle to B&H, the fall in cattle values since that time and the more difficult transport to Kosovo a cost of US\$ 1,500 is estimated. If 10,000 head is to be imported within the next 12 months and with contingencies for quarantine expenses, feed and attention are estimated at 10%, this gives a cost of US\$ 17.5 million. If indigenous sheep or grade Wirtenberg sheep may be obtained in Macedonia at the suggested price of US\$ 200 per head and 5,000 were to be imported an additional cost for sheep would be US\$ 1.1 million.

Summary of Preliminary Cost Estimates

	(US\$)	
Ruminant livestock conservation		6,325,000
Livestock feeding	5,700,000	
Emergency vaccinations	625,000	
Rehabilitation of livestock services		1,566,000
Re-equipping field services	336,000	
Rehabilitation of stations	420,000	
Livestock institute and AI services	810,000	
Livestock imports		18,600,000
Total		26,491,000

KOSOVO

PROGRAMME FOR RECONSTRUCTION OF RURAL ECONOMY

WORKING PAPER 2

FARM MECHANIZATION

Working Paper 2

FARM MECHANIZATION

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- 4. Emergency Requirements for the Spring 2000 Season (Maize and Hay) by Municipality**
- 5. Emergency Requirements for the Autumn 2000 Season (Wheat) by Municipality**

Working Paper 2
Farm Mechanization⁵¹

A. Mechanization in Kosovo

General

- Highly mechanised, small-holder agriculture
- Private farms average size 2-4 ha.
- Relatively few “social” farms which were also highly mechanised with higher-powered machinery.
- Relatively unsophisticated machinery used equivalent to technology used in Western Europe 30-40 years ago.
- In the private sector, large number of small tractors of which there were two main makes and types.
- Two most popular tractors in the private sector were IMT and Radovica (39 and 65 HP respectively) both made in Belgrade.
- Almost all other agricultural machinery was also sourced from Serbia.
- Prior to 1989 most machinery and spare parts were supplied through Municipal Co-operatives which also provided credit as well as purchasing surplus production.
- Small private providers of spare parts and repair services were allowed which, since 1989, gradually took over from the Co-operatives. These were mostly individual small sources and there were only a few larger companies with several outlets.
- There appears to have been very little investment in new machinery in the last 10 years and so the stock of farm machinery is well depreciated.
- Tractors and machinery appear to be very well maintained.
- The small farmer tractors is a truly multi-functional machine used for all operations apart from harvesting of wheat which was carried out by self-propelled combine harvesters.
- The transport role of the tractor is very important both for village to field transport (distances of up to 3-4 km) as well as inter-village transportation of both products and people.

⁵¹ This Working Paper was prepared by Mr. L.J. Clarke, Chief, Agricultural Engineering Branch, Agricultural Support Systems Division.

Makes and Types of Machinery Used (Private Sector)

- Tractors (33 – 65 HP mostly)
 - Makes: Racovice 65 HP
 - Racovice 50 HP
 - Racovice 67 HP
 - IMP 533 (33 HP)
 - IMT 539 (39 HP)
- Trailer – 3-5 ton – single axle
- Rotary cultivator
- Harrow
- 2 furrow-mounted mould board plough one-way
- Hay baler
- Maize Planter
- Wheat Drill
- Fertiliser distributor – mounted, pto driven.
- Rotary and Cutterbar mower
- Hay Tedder or Rake
- Knapsack Sprayer
- Hammer Mill for animal feed – stationary electric motor-driven
- Motor Cultivator 14.5 HP with attachments and 2 wheel pto driven trailer
- Grass cutter – stationary –electric motor
- Combine harvester – 12-14 feet cut – ZMAJ 141 and 533

Storage on Farm

Wooden Maize Crib

Wooden wheat store approx. 5000 kg capacity

Virtually all farm machinery in Kosovo was manufactured in Serbia with a few imports of tractors and machinery from Western Europe (J. Deere, Deutz), Poland (Ursus) and Belarus (MTZ) from the Soviet Union.

Numbers of Machinery (Pre-war)

- (a) In 1996, various statistics point to about 32,000 tractors as being registered. This number is made up of 4% <18kw, 25% 19-26kw, 53% 27-37kw and 18% > 37kw. The larger tractors were mainly found on the large social farms. In 1995 there were about 6,000 motor cultivators registered.
- (b) Numbers of other main types of farm machinery were:

Combine harvesters (wheat):	1,000
Ploughs (mouldboard):	27,000
Disc Harrows:	8,500
Harrows:	20,000
Seed Drills:	3,500
Fertilizer Distributors:	1,300

Mowers:	3,200
Trailers:	21,600

Support Services

- (i) Pre 1989, farm machinery and spare parts were predominantly supplied through the municipality co-operatives, which had a special outlet for this.
- (ii) Small private repair shops and spare parts shops were allowed to develop.
- (iii) Over the last ten years, these gradually took over from the co-operatives.
- (iv) There did not appear to be a franchised dealer network, which is commonly found in Western Europe.
- (v) Dealers dealt with spare parts for different machines from a number of sources including Serbia, Macedonia, and other West and Eastern European countries.
- (vi) The mission was told (and saw) that on average there were from 2 to 3 dealers per municipality.
- (vii) Small, private farm machinery repair shops were seen in every Municipality.
- (viii) The Agricultural Engineering Department at the University of Pristina had (pre-1990) a vocational training programme for operators and mechanics.
- (ix) Major repair services for the ZMAJ combine harvesters were provided by factory technicians from Belgrade.

B. Assessment of Damage and Losses

- No accurate assessment of this can be made until the surveys are completed.
- Various verbal assessments were offered to the mission and it is clear from these that, even taking into account some degree of exaggeration, the losses are considerable.
- Loss occurred due to physical damage (mostly burning) and physical removal (theft).
- In the absence of firm data and for the purposes of this preliminary report, losses have been identified according to reports of damage in individual municipalities.
- **During the mission's stay in Kosovo it was not possible to make an assessment of actual damage that has occurred. This must wait for reliable survey data.**

- It should also be noted and taken into consideration in assessing future investment requirements that the stock of tractors and farm machinery is already on average very old (> 10 years).

C. Rehabilitation Requirements

- (a) It should be noted that using general criteria to calculate required levels of farm mechanization would indicate that agriculture in Kosovo was generally over mechanised.
- (b) A general indicator of this is the high number of tractors per ha (1:14), but, more importantly, the number of tractors available for critical operations for specific crops.
- (c) In Kosovo, these are land preparation for the 70-80 000 ha of wheat in autumn and circa 100,000 ha of maize in the spring. This would give about one tractor for every 2-3 ha of crop.
- (d) An explanation of this apparent "over" mechanisation could be the previous predominance of the Co-operatives which offered cheap machinery on very favourable credit terms. Repayment of credit was often "in-kind" as the co-operatives also marketed the farm surpluses.
- (e) It is difficult to see how the previous situation can be recaptured particularly if there is no political will to trade with Serbia (where most of the machinery was made and prices were relatively low) and if farmers are exposed to market interest rates. If the commercial sector in Kosovo turns to purchasing machinery and spare parts from Western Europe, prices could rise by 50-100%. This would make the previous high levels of mechanization economically questionable.

Immediate

Spare parts:

- There is an immediate and on-going need for spare parts and types to service the remaining tractors and farm machinery. A detailed assessment needs to be made of the requirements.
- On the basis of a remaining part of 20,000 tractors, associated implements and 100 combine harvesters, 1% of the total value in spare parts would require about US\$1.5 million in spare parts.

Farm Machinery Whole Goods:

- It is unrealistic now to attempt to procure and transport new machinery in time for the Autumn 1999 wheat season.

- The immediate requirements are to ensure that some essential items of farm machinery reach the farmers for the spring cultivation and planting season (mainly maize) as well as for the early summer hay crop. The priority items for spring 2000 are:
 - Tractor 45HP
 - Ploughs – 2 furrow, mounted, one way
 - Maize planters
 - Disc Harrows –mounted offset
 - Spike tooth harrows
 - Mowers – rotary and cutterbar
 - Fertiliser distributors – mounted, pto-driven
 - Knapsack sprayers
 - Materials for livestock housing
- For summer and autumn 2000, the priority items for the wheat crop are:
 - Tractors 45 HP
 - Ploughs
 - Wheat drills – combination seed/fertiliser
 - Disk harrows
 - Fertiliser distributors
 - Combine harvesters – 12-14 ft cut bagger
 - Bags for wheat
 - Materials for wheat and maize stores
 - Hammer mills for animal feed.
- This list is based on the requirement to maximise production and storage of basic staple foods and livestock products. It does not therefore contain motor-cultivators (two-wheel tractors) and equipment because these are mostly used for horticultural production and transport. However, motor cultivators may well be added if subsequent studies show that investment in these items would be cost-effective and demanded.

Assessment of Future Investment Requirements

1. Table 1 gives a preliminary indication of the magnitude of losses of farm machinery for different levels of destruction/loss. For example, if the overall loss is 10% then the total replacement cost would be in the region of US\$ 85 million. If the overall loss is 50% then this will be US\$ 440 million. It should be noted that apart from the tractors, the mission was only able to obtain approximate figures of the total numbers of other agricultural machines owned by farmers, nor was it able to obtain how these machines might have been distributed between the different municipalities. Accurate loss assessment figures are also awaited.

Tables 2 and 3 give an indication of the requirements for the spring 2000 (maize and hay) and autumn 2000 (wheat) seasons for three different levels of replacement; 5%, 15% and 30%. These levels have been taken on the assumption that historically there has been a degree of over mechanization in Kosovo (see Section 3). However it is clear that a blanket damage figure cannot

be applied to the whole country i.e. different parts of the province suffered different levels of damage. In order to try to make adjustments for this, an attempt has been made to develop a little more sophisticated method for assessing preliminary damage and loss for each municipality has been taken. Tables 4 and 5 show this for next year's spring and autumn season. In these tables, in the absence of statistics of number of machines per municipality, the number has been based on the rural populations for each them using the assumption that most of the rural population were engaged in agriculture and that each municipality had the same concentration and types of machinery. This may not be altogether true and therefor the tables may not be very accurate, but in the absence of any other data, it is considered an improvement on taking a blanket damage assessment figure for the whole province. Once damage assessment figures are available for each municipality and there is a clearer picture of the former distribution of farm machinery these tables can easily be updated.

Using these preliminary figures, US\$122 million will be required for the spring 2000 season made up mainly of tractors, cultivating equipment, maize planters and hay making machinery. For the autumn 2000 season US\$28.5 million will be required mainly for seed drills and combine harvesters.

Provision of Services

- (a) In addition to investment in capital goods, it will also be necessary to provide for the re-establishment and further development of the farm machinery and equipment services sector (spare parts and repair services).
- (b) This can be achieved in two ways:
 - Linking the procurement of machinery with the development of dealers which will provide spare parts and/or repair services (these may be separate as at present).
 - Making available on a cost-recovery basis workshop equipment and internal fittings so that interested private sector individuals and/or companies will have access to these.
- (c) The mission does not exclude the possibility that provision of services might also develop from the old Co-operative structure, provided a modality can be found to develop them into private farmers' co-operatives.

Procurement

- Initial block purchase of spare parts should be channelled through existing dealers or dealers who will be established by the supplier.
- It is strongly recommended that contracts for the supply of tractors and farm machinery be divided amongst at least two and preferably three companies.
- Contracts should include clauses which stipulate that suppliers must establish a distributor (or work through existing distributors) and a countrywide network of dealers.

Management of Procurement and Distribution

- (a) A central management unit should be established as soon as possible in Prishtina.
- (b) This will have the following functions:
 - Collection of detailed information
 - Management of procurement
 - Identification of priority areas
 - Adjustment of quantities and machine types according to up-to-date information and changing priorities.
 - Supervision of compliance with contractual arrangements
 - Training and support to the interim administration
 - Local procurement
- (a) An international agricultural engineer with experience in procurement will be required, plus a team of three Kosovar experts, one administrative/accounting expert and one secretary.

Immediate and follow-up Activities

- Local contract with Kosovar experts to determine technical requirements for spare parts.
- Further collection, collation, analysis and reporting of on-going survey data, in particular detailed damage assessment figures and identification of detailed needs by geographic areas.
- Drawing up specifications and bid documents for agricultural machinery.

D. Issues

Cost-recovery

- (i) The issue of cost-recovery, if any, must be resolved. It is quite likely that future supplies of imported spare parts and farm machinery will be 50-100% more expensive than previously.
- (ii) If cost-recovery is to be established then the application and level of interest rates will need to be resolved.
- (iii) The mechanism of cost-recovery will need to be established. The mission's initial recommendation is that cost-recovery should become the responsibility of the dealers. This will set the basis for future dealer financing (This system has worked well in Albania).

Future Supply Channels

- In the past, most farm machinery and spare parts was supplied from Serbia. Prices were low (50-75% of most West European machinery). Although not easily resolved or answerable at this stage, the issue of whether these supply channels will or can be re-established will need addressing.

KOSOVO

PROGRAMME FOR RECONSTRUCTION OF RURAL ECONOMY

WORKING PAPER 3

AGRO-INDUSTRIAL SECTOR

Working Paper 3 **AGRO-INDUSTRIAL SECTOR**

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TABLE

1. Functional Condition of Product-Serving Capacities in Agro-Industrial Complex of Kosovo After the War

Working Paper 3 Agro-industrial Sector⁵²

A. General Situation in the Agricultural Sector

The Northern region of Kosovo, where climate is more continental, is covered to a large extent by forests. Farm holdings are small and mainly private. The area North to Pristina has larger land holdings and produces corn and wheat. Two main valleys, one stretching along Urosevac up to Pristina, are fertile and land is used for wheat, corn and oilseeds. The region South West to Pristina has considerable wine cultivation, both in the private and the public sector. The region around Dragas is producing lamb and sheep. The Western part of Kosovo is covered by forests, with mushrooms and an important production of black and blue berries, exported mainly for juice production.

Agricultural production was organized in agro-kombinats. In the 1970s and 1980s the small private farmers cultivating 95% of the arable land could join these kombinats in mainly two ways:

- (i) *complete integration*, by letting the agro-kombinat take over the farm and pay the farmer a salary and pension;
- (ii) *association*, by which the agro-kombinat provided part of the inputs and bought the production, year by year. The farmer still had the right to his land.

In Kosovo, the complete integration of farmers went very slow, due to the fact that farmers were mainly Kosovo Albanians while agro-kombinats were operated by Kosovo Serbs. To date, unofficial numbers show that only 8% of all land is owned by and operated in the public sector. Most livestock, cows and sheep are owned by private farmers.

Most farmers are Kosovo Albanians, while the Kosovo Serbs that had moved into Kosovo in the last ten years have settled into cities, or villages, but not as farmers.

Note

Names of cities and villages are currently being changed from Serbo-Croatian to Kosovo Albanian. This report refers to the names used by the persons met. Some mistakes might have occurred.

B. General Situation of the Agro-processing Industries

The larger plants, belonging to agro-kombinats (the largest one is Agro Kosovo, with headquarters in Pristina) have been little damaged by the war. Exceptions include the poultry production unit in Krivove-Gllogovac which was completely destroyed by Nato bombs and the winery in Veleka Kruza which was also damaged by bombing, due to its vicinity to a large mineral oil depot. An acute lack of maintenance in the years prior to the war has slowly degraded significant parts of the industry.

It should be understood, however, that poor maintenance has always been, at least for the last 30-35 years, a problem for Yugoslavian industries, due to their management structure (selection of management by workers). Managers always tried to give

⁵² This Working Paper was prepared by Mr. C. Cronberg (Consultant), e-mail: christer.cronberg@swepnet.se

maximum benefits to workers. Keeping the machinery and buildings in good shape would have meant that less benefits could have been given to workers, thus increasing the risk for management of not being re-elected.

Since Kosovo lost its autonomy status in 1989/90, key workers, managers, foremen, laboratory staff, accountants, marketing people, etc. of Albanian origin, have been forced out of their position. Consequently, very few of the staff that are now moving back to the companies have had any work experience in these companies in the last eight to nine years. It also seems that, even where machinery is more or less intact, a large portion of the company documentation has disappeared. The future ownership of companies could be a problem. Several companies were operated as subsidiaries of large agro-kombinats in Serbia. New staff and workers, mainly Kosovo Albanians, have taken over most positions in these companies, after the former employees left. Committees are being created to organize and supervise the start-up of production, inventories, and to process the products that farmers already start to bring to the plants. The “legalization” of the situation and the privatization of the companies should start as soon as possible. This process requires specialized expertise. The land that belongs to agro-kombinats could be split off and privatized as a separate operation.

Urgent Issues to be Addressed

- (i) Immediate need of working capital for most enterprises. Funds are required to buy the most urgent items such as : spare parts, packing material, nafta, ammoniac for cold compressors, sugar and other additives, as well as to pay part of the raw materials. It is not foreseen that any of the companies will process large volumes, but it is very important that operations start and that the new management gets some funds to finance start-up activities. By enabling the starting-up of operations, further deterioration of these companies will be avoided.
- (ii) Farmers are starting to bring their products to the processing units, i.e. fruit, berries, vegetables, grain, and oilseeds. As far as livestock is concerned, the situation is unclear. A considerable number of cows, horses, sheep and poultry have disappeared and have to be replaced.
- (iii) New management need support and training in sectors such as:
 - Investment preparation (decision-making on priority investments, cost calculation, business plans)
 - Establishment of proper employment structures (to avoid over-employment)
 - Establishment of new accounting systems
 - Establishment of Management Information Systems
 - Quality and sanitary controls and training of staff in laboratories
 - Marketing and sales, as well as distribution.

- (iv) The privatization process has to start. Company assets have to be valued. The present and future legal status of companies has to be considered immediately, in order to avoid further problems.
- (v) Smaller private industries, such as wheat mills, bakeries, small milk processing plants, meat cutting and butchery shops, have suffered damages due to the conflict. Some units were burnt or damaged in other ways. However, such companies are facing less complex issues : if they can obtain funding to carry out necessary repairs and to finance packing material/other inputs, these companies can resume their activities quite rapidly.

Based on the information obtained during the visit to Kosovo, the activities in which the State and the private sector have been most active can be divided as follows:

Agro-kombinats

Private sector

Milling (2 large mills)

Milling (about 20 small mills)
Feed mills (3 large units)
Several small units for mixing feed

Bakeries (about 10 bakeries, in main cities)

Small bakeries (estimated 50-100)

Slaughterhouses (2 export oriented places)

Semi-private communal slaughter

Broiler slaughterhouses (large 1 or 2 ?)

Small chicken slaughter at farm level

Vegetable oil extraction and refining (1 unit)

none

Milk processing (1 large unit, 2 - 4 smaller)

Small mini dairies (2-3?)

Soft drink production (3-4 units)

none

Wine processing (5-6 units)

Small, for home consumption

Fruit and vegetable processing

none

Recommended Immediate Actions

Establish a system by which loans, in the amount of up to USD 25,000, can be extended to agro-companies in need of working capital, without other security than the signatures of the present management committee. It is estimated that some 50 / 80 companies would apply and the total amount of funds involved would be around USD 1.5 million.

To handle and disburse these initial funds, it is strongly recommended that a small working team be established to review applications. Applications would be assessed on the following main criteria:

- utilization of the proceeds of the loan and its impact on economic activities;
- Repayment capacities of the borrower in the short/medium term (one ? year), in view of basic business prospects;
- prospects for the long term future of the company;
- management/marketing system.

Assistance in the handling of legal matters, in particular with regard to the ownership of assets. Some intermediary solutions could be proposed (say, for the next two years) or privatization could be carried out immediately.

A legal team needs to be established to look into the overall situation of company ownership, prepare broad guidelines under which temporary management teams can work.

Many of the agro-kombinats are involved in social activities (kindergartens, support to the local community in the form of provision of heating, etc.). Legal advice is also required to envisage how these services can be transferred to other entities.

Technical and financial assistance for companies to prepare feasibility studies (assessment of future markets and competition, level at which operation should start, credit requests, etc.). This is required to avoid that investments are made in companies which cannot continue to operate under the former type of system (because of competition, of non-viable activities, etc.). Most large agro-kombinats have highly diversified activities/units, many of which are not longer viable and should be closed down.

A working team should start to work as soon as possible with agro-business companies to help them establish some strategy for the future, analyze their competitive strengths and weaknesses. Feasibility studies should be made for sensible short and medium term investments.

Training of local consultants to assist new management units in areas such as accounting, marketing, and management information systems.

C. Assessment of the Different Sub-sectors

Grain Silos and Grain (mainly wheat) Milling

General Situation

Total demand for grain, mainly wheat, is about 400,000 tons per year. The silo capacity in Kosovo amounts to some 150,000 tons and the total wheat milling operation has a nominal capacity of about 400,000 tons of grain. Two large mills are located in Kosovo, one in Kosovo Polje and the other one in Zerce, close to Orahovac, each one having a capacity of 240 tons / 24 hours. In addition, some 15 small private mills with a standard capacity of 2-3 tons per hour have recently been built by private investors. The large units are being used by KFOR as bases for their operations.

The two large mills have suffered from bad maintenance during the last 9-10 years, but have not been damaged during the war. Some of the small private mills have been burnt, but most are currently in operation, processing the wheat of the local farmers.

The quality of the grain brought to the mills is low, due to a high level of weeds (no herbicides were used last year). During my trip around the area (2 days), some 10 combines were seen working in the fields, harvesting wheat.

Large mills were operated under Agro Kosovo.

Kosovo Polje Mill

The silo complex is able to handle c56,000 tons of grain, mainly wheat and has a large dryer. Silos are in relatively good condition. The silos currently contain approximately 700 tons of wheat. The silo equipment has some technical problems and needs spare parts in order to be able to operate again. However, it was not damaged during the war. The whole place (except the silos) is in poor condition and the area lacks electricity supply to operate correctly. The silos are under Kosovo Serbs control, which means that Agro Kosovo has little influence on their operation.

Next to the silo complex, there is a wheat flour mill with a nominal capacity of 240 tons / 24 hours. The plant has been operating, due to technical problems, with a capacity of 90 tons / 24 hours in the last few years. The flour silos can handle c4,000 tons. Management thinks that it would be possibly to resume operations, when wheat is harvested, but capacity utilization would be low, due to a lack of wheat. The mill has problems to operate correctly due to low power tension and limited maintenance during the last 10 years. Yield will be low when the mill operates at low capacity. Milling equipment is from Buhler in Switzerland, while silos and grain handling equipment are from Slovenia.

Serce Mill (close to Orahovac)

These silos have a capacity of 56,000 tons in 72 individual silo units. The mill can handle 240 tons / 24 hours. Private individuals are now working in the mill, processing farmers' wheat. Due to lack of liquidity, payment terms for milling operations are as follows:

For 100 kilos of wheat, farmers get 62 kilos of wheat flour, or 50 kilos of wheat flour and 30 kilos of wheat bran (wheat bran is used for animal feed).

Private Mills (Orahovac area)

The region also had 12-13 small private flower mills. Some of them were burnt. The capacity of these mills is about 2-3 tons per hour each. Equipment is mainly coming from Croatia or Slovenia. The mills have a relatively good yield of about 70% flour. Buildings include 4 or 5 storage buildings, with the main milling equipment installed on the first floor. [Little or no storage capacity is attached to these mills (???)].

Ferizaj Grain Silos (Urosevac area)

The total capacity of the grain silos is 13,000 tons, in 18 silo units. The silos apparently contain c3,900 tons of wheat at present. The silos are equipped with grain dryers. They were not destroyed during the war but the level of activity is currently very low.

Bakeries

General Situation

Most cities in Kosovo have a bakery belonging to and operated by Agro Kosovo. These bakeries receive flour from the large milling units and, during the last years, have served urban population. The private sector has established a number of small bakeries, successfully competing with the larger, less efficient public bakeries. Wheat flour is purchased mainly from private mills. Kosovo is lacking facilities to produce normal bakery yeast. All yeast is imported from Serbia.

Pristina

The large, newly constructed bakery, has a nominal capacity of 100,000 loaves of bread per day (60 tons per day), with equipment from Slovenia (Gostola/Nova Gorica). To date, the bakery is partly occupied by KFOR and the plant produces c3,000 loaves of bread per day. The low capacity utilization is reportedly due to the low purchasing power of the population. Grain comes from:

- Kosovo region: about 30%
- Voivodina region: about 40%
- Import, including Canada: about 30%

One plant, operated under Agro Kosovo, is producing cakes and confectionery. The current situation is not known.

Ferizaj (Urosevac) area

Next to the silos, is located a bakery with two bread making lines, currently producing c3/4,000 loaves of bread per day. The bakery, even if in poor condition, can produce more, but the demand for bread is low. Capacity of the bakery is about 36,000 loaves of bread per 8 hours. Since the silo and the bakery have no mill, wheat is milled in Kosovo Polje (grain from the silo is exchanged against wheat flour). The bakery lacks coal for the production of hot air, which makes the bread brown. The main ovens are fuelled with nafta. The bakery started operations on June 20 and is selling bread for Din 4 per 0.5 kilo of bread. There is a large number of small private bakeries in the region (c35) and this larger bakery has difficulties to compete with them. The bakery has 5 shops to sell bread in the vicinity of cities. A UK company supplies yeast and nafta. Local authorities are asking the bakery to reduce the price of bread to Din 2/3 per loaf, due to the low purchasing power of the population. The plant used to have 10 trucks for bread distribution. Only one is left. In urgent need are bread formers and the metal belt taken away from one oven.

Stimlje

Small private bakery in operation, producing some 2,000 loaves of bread (0.6 kilo) per day, with a capacity of c6,000 units per day. The unit employs 4 persons. Due to lack of purchasing power, the bakery is holding back its production. Bread is currently sold at Din 5 per loaf.

Feed Mills

Kosovo Polje

The main feed mill producing concentrate is located in Kosovo Polje. The plant is under control of Kosovo Serbs and limited data is available about the status of the plant.

Klina

The feed mill is now under control of KFOR (Italian forces) and the plant can not be visited. The plant was not damaged during the war.

Private Small Feed Mills

Small feed silos and feed mills are located all over the country, and show little damage.

Seed Processing

Klina

A very modern plant is located in Klina, processing wheat and corn seeds. The plant is not damaged, but in the hands of KFOR (Italian forces) and cannot be used. Apparently, some conflict over the control of the facilities started between Kosovo Albanians and Kosovo Serbs. KFOR moved in and allowed none of the parties to enter the plant.

Sugar Beet Processing

Pece

The plant has not been working or working at a very low capacity during the last few years. The plant has been partly damaged, but could reportedly resume operations.

Milk Processing

Kosova Polje

The largest milk processing plant in Kosovo is located in Kosovo Polje. The plant has a nominal capacity of c100,000 liter of milk / day. Milk is cooled and can be processed into the following products:

Sterilized, aseptically packed milk:	4,000 liters per hour (Tetra Pak unit, AB 3)
Pasteurized milk, packed in plastic bags:	2-3,000 liters per hour (Prepack machine)
Two yogurt packing lines:	3-5,000 cups per hour (Hamra machines)

The plant is operated under PKB Beograd, and has been working at very low capacity during the last few years. The area used to have Holstein – Friesian cows which are now either displaced or slaughtered. There is no processing activity for the moment and no interest to resume operations. During the visit, it was noticed that the main machines and some milk collection units were being taking out of the plant (and transported to Serbia ?). Management has no clear plan for the future.

The relevance of the rehabilitation of the plant depends on the establishment of new dairy farms in the area. The plant was originally partly financed by the World Bank. It was always used well below full capacity, due to the lack of milk in the area.

Prizren

This small processing plant, with a capacity of 12,000 liters / day, is built in the same zone as the processing units of the “Progres” agro-komplex. The plant has equipment to fill pasteurized milk in plastic sachets, cheese vats, and a yogurt production line. The plant is leased out to a trading company and is currently recombining milk powder and manufacturing yogurt (0.2 liter units). Daily capacity is about 2,000 liters. Milk powder used to come from PKB in Serbia. To date, the supply of milk powder is uncertain. The dairy cows of the area (some 14,000 head in the private sector) are no longer there. Discussions have been held to buy milk from the FYR of Macedonia. However, it will prove rather expensive, both because of purchasing price and transportation costs. Today, the plant employs 12 persons. It is recommended that the plant continues to source milk powder for recombination, until the local dairy herds are re-established.

Private Small Mini-Dairies

A few smaller mini-dairies have been constructed by private Kosovo Albanians. These plants have a capacity of 1/2,000 liters / day. One dairy (in Jakova, Alfa Laval supply) has reportedly been completely burnt out.

Slaughterhouses and Cold Stores

Kosovo Polje

Kosovo Polje has the main slaughterhouse for cattle and swine. The plant is being reconstructed and new equipment from Slovenia has been imported. However, civil works have not been carried out. In connection to the new planned slaughterhouse, there is a large, partly operational, 4,000-ton cold store. The cold store is operated by Kosovo Serbs and controlled by the KFOR (Russian). Movement of products (in and out) is limited. The cold store was not damaged during the war but maintenance has been poor. Ammoniac is missing. Management seems to be rather poor.

Prizren

A small, export-oriented slaughterhouse is located within the premises of “Progres” agro-kombinat. The plant was constructed in 1995 and is intact. It can start to operate at any time. Most parts of the equipment are from Split (Croatia). The main purpose of the plant is the slaughter and processing of sheep, produced in the South-West part of Kosovo, for export.

The capacity of the slaughterhouse has been:

Sheep and small animals:	70,000 heads per year, mainly exported to Italy/Greece
Cows:	26,000 heads per year

The cold store used for both meat and vegetables has a nominal capacity of 5,000 tons. No meat is currently stored in the cold room. Some small repair is needed on the cold compressors, delivered from Ljubjana (Smelt company).

To date, it is said that the South-West region of Kosovo has large amounts of sheep ready for slaughter. If this is right, it would be very important to get the plant back into operation, partly to provide income to the farmers of the area, partly to provide food for the population.

Gjilan (Gnjilane)

Gjilan has a slaughterhouse for small animals and poultry. Status is unknown.

Bec – Gjakova

Broiler slaughterhouse with processing of broiler parts into broth concentrate. Status is unknown.

Most Cities in Kosovo

Small communal slaughterhouses have been in operation in most cities of Kosovo, with simple slaughter and inspection facilities. These facilities are generally without cooling facilities. The meat was handled by different butcher shops.

Suva Reka

Retail sales of beef and frozen chickens. Beef is coming mainly from Novi Sad and Serbia, sold at an average price of DEM 7 / kilo. The shop sells some 30-40 kilo per day, the market demand is low due to low purchasing power of the surrounding population.

Poultry and Egg Production

Krivove-Gllogovac

This poultry unit, with 20-30 large poultry houses, located to the West of Pristina, reportedly had a nominal capacity of 7.2 million birds per year. The plant was entirely destroyed by bombing due to its vicinity to the airport. No reconstruction is possible.

Lipjan

This egg production company, with a nominal capacity of 400,000 layers (equivalent to about 80 million eggs per year) has not been in full operation for the last five years. Production has been at a very low capacity, and part of the equipment (feed control and automatization) has been moved away. All equipment is imported from Germany and Holland. The plant has been leased out for the last 18 months and some eggs have been produced. 25 persons are currently working in the plant, cleaning up the place, and repairing water and electrical lines. The holding crates for the layers are apparently not destroyed, but the unit for sizing of egg is not working. KFOR (UK) has partly taken over the place.

The team working in the unit plans to start egg production in two to three houses, as soon as possible. However, the unit has problems to work without part of the feeding automatization system in place. The plant has a unit for mixing of feed. Concentrate has to be imported. Layers would have to be imported from Macedonia or Hungary (cost DEM 7-8 for an 18-month layer). Kosovo is currently importing eggs from Macedonia and the price of eggs has recently increased. Eggs are paid DEM 0.13- 0.15 per unit. Most likely, the operation would be profitable.

Juice and Soft Drinks Production

Gjakova

A juice plant is established in the area. It is now apparently partly damaged.

Lipjan

There is a Coca Cola plant which seems to be intact. It is not known when operations are due to start again.

Suva Reka

The main winery is also operating a bottling plant under Schweppes license. The filling of Schweppes soft drinks will start on July 14.

Djakovica

The fruit juice plant has been partly (?) removed by Serb police/army. The current situation is unclear.
(see also section on Fruit and Vegetable Processing)

Brewery

Pece

The main and only brewery in Kosovo is located in Pece. The brewery has not been damaged and has a nominal capacity of 600,000 hl per year. Beer is sold in the major cities.

Vegetable Oil Processing.

Ferizaj (Urosevac)

The large vegetable oil extraction and refining plant has a capacity to process 100 tons of oilseed / 24 hours, by mechanical and solvent extraction (equipment delivered from Krupp/Extractions Technik, Germany) and a 100 tons / day oil refinery (delivered from Alfa-Laval, Sweden). The plant also has a fat hardening system and a margarine line. Refined oil is filled in plastic bottles (8,000 liters per hour) and margarine in consumer packages. Main raw materials have been sunflower and soya bean (to a lesser extent). To date, only part of the refinery is working.

The production of sunflower in Kosovo used to be c18/20,000 tons per year on about 10/12,000 hectares.

The company also has a unit for margarine and spread production, but it has not been in operation for some time, as part of machinery is missing.

Vegetable and Fruit Processing

Prizren

The main plant in Kosovo is located in Prizren and was operating under “Progres” agro-kombinat. Annual capacity is about 16,000 tons. The site is guarded by KFOR (Germany). The main product lines are:

- tomatoes (canned, paste and ketchup),
- different types of fruit juices, mainly with pulp,
- canned vegetables,
- compotes and marmalades,
- frozen berries, such as black and blue berries,
- cherries and carrots for export.

The plant has not been damaged by the war, but some sections are poorly maintained. The plant has washing lines for fruits and vegetables, a Jedinstvo 100 ton/24 hour tomato paste production line and German equipment for freezing and canning of vegetables and fruits. Two Lubeca can closing lines are lacking spare parts.

The line for canning cherries is being put back into operation. Sugar is lacking for canning in glass jars with switch on-off lids. Glass jars used to come from Serbia. Imports from Bulgaria, Hungary are being considered.

The quality control laboratory is well equipped and functional. The laboratory can make both chemical and bacteriological tests.

The plant has a large cold store (5,000 tons) and freezers to produce semi-finished and finished frozen products, with Danish (Gram) compressors. The temperature of the cold store can be operated between - 0 and - 45 degrees C. One urgent problem is the fact that ammonia is running quickly out of stock. Without ammonia, the temperature in the cold store will increase rapidly and the 1,000 tons of different products in store will be destroyed. At present, some 300 persons are working at the plant (out of total staff of 2,000 persons).

The company needs support in:

- obtaining ammonia for the freezing compressor (about 5 tons is urgently needed),
- sugar for the canning of cherries, sourced from private farmers around the plant,
- nafta to operate the boilers,
- spare parts for harvesting equipment,
- selected packing material.

Technical assistance is needed for the privatization of the company, as well as for the improvement of management of the plant.

Mushroom Production

Klina

A unit is (was ?) producing mushrooms in Klina. Status is unknown.

Flower Production

Vitina

The area has a large flower production (mainly roses) for export to Serbia and other parts of former Yugoslavia. Present situation is unknown.

Wine Processing

Suva Reka

The region is a major wine producing area, mainly in the private sector. The yields of vineyards are now very low, most likely not more than 15/20% of normal yields, due to the lack of pruning and use of agro-chemicals. The company has c800 ha of vineyards, but also buys grape from the private sector. The winery located in Suva Reka has a nominal capacity of c7 million liters/year. The main production in the area is white wine. The winery mainly produces wine in bulk. The bottling unit and the plant for alcohol production are located away from the main wine processing plant.

The former Kosovo Albanian workers of the company are coming back and a committee has been formed to get the plant into operation again. The plant has not been destroyed during the war, but is poorly maintained. The technology used is old and most Serbian equipment is from the 1960's. Most trucks have disappeared. No more Kosovo Serbs are working at the plant and most of the Kosovo Albanian workers that are coming back have not been working in the plant in the last 9/10 years. During the main processing season, c30 workers were hired. The plant is also lacking water and full electricity supplies. The present production of wine (1999) is estimated at about 0.6 million liters (assuming one ton of grape per hectare and a yield of 70% from grapes to wine).

The company has c4,000,000 liters of wine stored in the wine containers. It urgently needs bottles to bottle part of the wine to be sold. Working capital could then be created to purchase grape. Wine in bulk is sold at about DEM 0.85-1.00 per liter, while wine in bottles can be sold at DEM 2.0-2.6 per bottle. Liquor (45% alcohol) is sold at about DEM 4.0 per liter. Production of white and red wine is about 50%-50%. New labels are also needed for the bottles. The cost of bottles and labels is now about DEM 0.38 per unit.

The new committee for the company advocates a rapid privatization, both of the processing plant and the land owned and operated by the company. Management needs training in technical aspects, in management information systems, accounting, and use of computers.

Support is needed as follows:

- funds, to be borrowed, for the purchase of bottles and labels (DEM c2-300,000),
- technical assistance for the privatization process,

- technical assistance for management, accounting and use of computers,
- tractors for field work (c20 units needed for the 800 ha owned by the company).

The company also has a soft drink plant, working under Schweppes license. The soft drink line will start operations on July 15. Concentrate, for bitter lemon, grape fruit, and tonic water used to come from Ljubjana, new contacts will be established with Schweppes in London.

Veleka Kruza

This large winery is located close to the railway and to a mineral oil depot. It is one of the largest winery in Kosovo, with additional storage capacity in Landovica, close to Prizren. The plant has a bottling line, storage house for wine mash (seeds and peel), drier and press for wine mash, and a distillery for liquor. The capacity of the winery is about 33,000 tons per year and the equipment is modern.

Due to the vicinity of the mineral oil depot, the winery was hit by Nato bombs. Two of the eight wine tanks were damaged, as well as the ceiling over the battery of eight tanks (the tanks are divided into three units on top of each other), each tank containing 480 m³. The tanks are made of concrete with a glass type of lining. In addition, during the bombing, the ceiling over the distillery, press unit, and boiler unit was also destroyed. The large office building seems to be intact.

The establishment of a committee for the cleaning up and resumption of operation is still under way. A German company will come to the site and assess damages. The wine in the tanks will be sold off. Crushing of wine grapes, from the 1,200 ha of vineyards belonging to the company, will start relatively soon. The company employs c350 persons in the plant and in the field. During harvest, temporary workers are hired. All employees of Serb origin have left and the Kosovo Albanians are taking over their old positions.

Orahovac (close to)

This large winery, similar to the one at Veleke Kruza, was apparently an area of dispute between Kosovo Serbs and Kosovo Albanians. The present situation is that the site is now under control of KFOR (Dutch forces). Entrance to the plant is not allowed. The plant is intact and surrounded by large area of wine plantations.

Tobacco Production/Processing

Djakovica

The area around Djakovica and Orahovac is a main tobacco growing area, in the private sector. Part of the tobacco was exported. The tobacco processing plant in Djakovica is apparently intact.

KOSOVO

PROGRAMME FOR RECONSTRUCTION OF RURAL ECONOMY

WORKING PAPER 4

IRRIGATION AND DRAINAGE COMPONENT

Working Paper 4
Irrigation and Drainage Component
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5. Irrigation System Repairs: Action Programme for Kosovo Authorities in Preparation for Future Studies
6. Water Management/Institutions
7. Irrigation Development in the Early 1980s

Working Paper 4

Irrigation and Drainage component

A. BACKGROUND

Terms of Reference

The Consultant visited Kosovo from 12 through 19 July 1999 under Terms of Reference (TOR) as shown in Appendix 1.

Activities

The Consultant carried out four days of field inspection in the main irrigation areas of the country followed by two days in the offices of Icer-Lebenc Irrigation Project in Pristina collecting data to the extent available in the very short time of the mission. Brief notes on these visits are given in Appendix 2. The Consultant was accompanied throughout by his two counterparts (see Persons Met below) and an interpreter, and met as many of the personnel at the Enterprises as were available. Severe time and access limitations restricted the visits to cursory discussions and limited site inspections, on which the impressions and proposals of this report are based.

Persons Met

The list of persons met during the mission is given in Appendix 3.

Limitations

Due to the very abnormal conditions obtaining at the time of the mission, some only four weeks after the NATO forces (KFOR) entered the country, the Consultant was obviously constrained in his work, and this report and the proposals therein are reflecting such limitations. The main constraints encountered are as follows:

- **Mines, booby traps and unexploded ordnance:** As a result, the personnel of the irrigation organisations are not permitted to enter any building, including pump stations and offices, until they have been checked and cleared by KFOR or the civilian mine-clearing teams now trained and operating. Following incidences of animals detonating mines along the canals, no access to them is possible until they are swept. Thus the data on damage and repair requirements has been prepared from superficial inspections from "safe" observation points (hard roads etc) and from the understanding of the irrigation personnel.
- **Irrigation Personnel:** due to the policy of the previous administration, most or all Albanian Kosovars were removed from senior positions in about 1990. Where these have now returned to the country or have emerged from hiding, and have taken up their posts again, they have a gap of some 10 years in their detailed knowledge of the respective systems. The situation regarding staffing numbers on the Irrigation Enterprises varies from for instance a high level in Prizren to very limited in Istogu. Nowhere do they have vehicles, and in most cases the offices are vandalised with many items stolen. No salaries are at present being paid. In many cases it is not known if the staff that fled are alive, and if so whether they will return to Kosovo. Many people are very traumatised by their recent experiences. Such personnel appeared disorientated and the information they provided may not be fully accurate.

- The Consultant was extremely fortunate to be provided with two very knowledgeable and experienced counterparts, who were able to locate a considerable amount of statistical data regarding the irrigation systems in the country. Some of this data had been hidden to prevent its being destroyed in the widespread firing of buildings.
- **Government Institutions:** As no recognized government had been established in the country, and agencies such as the Ministry of Agriculture were not yet defined, the mode of working was to make direct contact with those present and former staff and managers directly. This meant that although technical aspects were able to be covered, no indication was available as to the requirements and priorities of the country, and the Consultant with his counterparts were obliged to anticipate what these might be.
- **Security Forces:** Access to certain areas was prevented by KFOR due to their perception of the local security situation. A UN Laissez Passer could facilitate access to certain areas.

Mission Accomplishments

In spite of the limitations noted above, the Consultant was able (mainly due to the dedication of his counterparts) to accomplish enough field observation and collect sufficient data to be able to make an appreciation of the situation, and to identify the main sectors where immediate attention is required to kick-start the irrigation systems back into limited activity to secure next seasons crop. The details of physical activities required are of low order of accuracy, and cost estimates are approximate. As much more will be required in addition to these emergency activities to bring the systems back to full operational efficiency, the Consultant left with the counterparts an action plan for data collection which would support a future preparation mission to prepare a rehabilitation project in its conventional sense.

B. GENERAL SITUATION

Damage Assessment

As may be seen in the field notes in Appendix 2, the irrigation systems are in somewhat better condition from war damage aspects than anticipated. The dams are in good operational condition, but some new furniture and equipment is required. All communication equipment has been taken. The main canal systems are apparently in fair condition, with minor war damage which can be quickly repaired when access is permitted and when funds become available. The secondary systems, which are mainly buried pipes, are in poor condition in that some 30% of valves and hydrants require replacement (counterparts' estimate). This is thought to be due both to vandalism and lack of maintenance during the last nine years.

Pumping stations have not been inspected, but the various enterprise chief engineers have submitted details of each scheme to the best of their knowledge. This information is given in Table 1. From this table, it is noted that in virtually every case the electricity supply needs to be replaced with about 50% of poles and 100% of line. It is thought that many transformers and switchgear panels were stolen or vandalised, and will require about 30% replacement. Pumps and valves would appear to be generally in reasonable condition with mainly repairs due to lack of

maintenance required with few new pumps. Electric motors however require both repair and replacement in approximately equal proportions.

Pump station buildings are generally in fair condition, and mainly require new windows and minor repairs.

Of the hydraulic structures visited, the gates and operating mechanisms are in many cases rusted or missing, mainly due to neglect. In order for many of the schemes to operate, attention must be paid to this component.

Offices and stores have been used by the Serb forces, and were generally roughly treated during occupancy and ransacked on their departure. Most of the furniture was destroyed, laboratory equipment damaged, and vehicles and mechanical equipment taken or destroyed. Much documentation has disappeared. However, this aspect is readily corrected provided funding is provided, and already the returning staff are cleaning up those buildings that have been security cleared, and are finding basic furniture. All communication equipment and facilities appear to have been taken, and complete re-equipping will be necessary.

Status of Major Irrigation Schemes

An attempt was made by the Consultant to assess the rate of decline in irrigated area since the construction of the various formal schemes in Kosovo. Although some statistics were available, much reliance was placed on anecdotal information from the field offices. The time for data collection was very short. These factors, together with the limited access to most parts of the systems, indicate that the information in this report will have to be reviewed during the planned September mission.

The situation regarding pumping facilities is given in Table 1. From this table an analysis has been made on the perceived works required, presented in Table 3. From this, it is reported that there are some 24-pump stations containing some 79 pumps. All stations require repairs to or renewal of the electric power line, transformers and switchgear. Of the pumps, 16 new units are required, with repairs to 61 units. Electric motors are more in need of replacement at 41 units, with 38 needing repair.

It should be noted that in every case the shortfalls in the electric power facilities are a result of vandalism and are recent. The problems with the pumps and motors are more a result of some nine years of neglect. The repairs to pump houses are invariably due to vandalism.

The disposition of irrigation schemes given in Table 2 indicates that some 76,490 ha were constructed, comprising 38,680 ha under sprinkler and 37,810 ha under surface irrigation. Due to various normally encountered factors such as urban encroachment, shortage of water etc, this fell to 55,870 ha in 1990. This should for the purposes of this exercise be regarded as the datum for recovery, although a large potential exists for further new development such as the Metohija 2 and the Iber-Lepenc 2 extensions. At 1990 the balance between sprinkler and surface irrigation was maintained in the same proportions as at construction.

Then up to 1998 a period of neglect occurred due to little or no maintenance, resulting in a decline in areas to 8200 under gravity surface and 2300 ha under sprinkler, giving a total of 10,500 ha. In 1999, no irrigation was practised, which is due to the exodus of farmers and not to system disruption.

Minor Irrigation

Throughout Kosovo there has been the development of small informal irrigation. It would appear that where the water source is outside the command area, the schemes however small were regarded as state schemes and fell under the local water enterprise for construction and water

charge collection, although their operation would appear to be under the local farmers and not the enterprise. This would account for most small schemes.

It has been very difficult to assess the extent of minor irrigation in the country, and only some 1200 ha are shown in Table 4 for six communes based on data provided by the counterparts. All this is by gravity. Other statistics provided indicate that in 1989 there were some 2808 private small pumps, rising to 3017 in 1995. This rise could have been the farmers' response to the decline in formal government controlled schemes. A very approximate area commanded by these pumps would be 30,000 ha. It is not known how many are still operating, nor the balance between electric and petrol/diesel power.

Staffing

Since 1990 when the then province was placed under direct Serbian control, the ethnic Albanian staff have been sidelined. Many former senior staff were given menial positions, and due to this lost the detailed knowledge of their systems. In the recent persecution of the ethnic Albanian community, some are thought to have been killed. Many left in the exodus to neighbouring countries as refugees, and are now starting to return. In certain enterprises, such as Prizren, the staff has built up to viable level, and provided funds and equipment are provided work on repairs could commence. On others, such as Istogu, only the Chief Engineer is in post, with no knowledge of the disposition of the former staff. Opinion has been given that some engineers will stay in the countries in which they took refuge.

There is thus a serious staff deficiency, both in competence and in numbers. Until the former staff who are still alive and wish to return to Kosovo are identified, it will not be possible to estimate the viability of individual enterprises. There is thus a possible need for outside expertise to assist in the reconstruction programme and the subsequent operation of the systems until young local engineers can be trained. A possibility is the use of the consulting companies which were formed to plan, design and supervise works on the Irrigation Rehabilitation Project now ongoing in Albania.

Institutions

At present the only administration in Kosovo is the United Nations through UNMIK, with no civilian establishment in place. In the irrigation sector the only contact was with the Director of the Iber-Lepenc scheme and a former member of the Ministry of Agriculture, who acted as the senior technical counterparts. Fortunately both gave their services willingly without remuneration, and were able to collect enough data and statistics to permit a meaningful analysis. The situation should not continue for much longer in this vacuum, as many potential donors (especially the NGOs) are now arriving in Kosovo and require data and targets for their assistance.

The senior counterparts requested the Consultant to advise on how they should cope with the situation at present. The possibilities were discussed, and it was suggested to form, within UNMIK, an ad-hoc steering committee to receive the donors and ascertain their interests and offers, to coordinate the potential aid, to supervise the flow of funds, and to monitor works. At the time of departure of the mission, the formation of this committee had not taken place, but it is understood that it will soon be formed.

With reference to any assistance which may arise as a result of the current mission, it will be necessary to await the formation of such a body before positive programming and technical content can be defined, before funding is released, and so the priorities may be defined.

C. REQUIREMENTS FOR IRRIGATION

General

It is always prudent to justify investment in irrigation facilities vis-à-vis rainfed cropping, especially when at present the crops appear to have grown relatively adequately without it. Year 1999 is a wet year, explaining this. To do this convincingly requires the study of various crop performances in different climate zones in a country using rainfall-response simulation techniques. This takes time and requires long-term rainfall data, neither of which were available for the mission. To make a preliminary assessment, rapid crop-water requirement calculation were made for the average year for both east and west sectors of the country for the predominant crops grown.

Crop Water Requirements

The average climatic data for both east and west sectors are shown in Appendix 4. From these, and by applying CROPWAT software, the average irrigation requirements for the five crops with the highest planting coverage were determined, considering effective rainfall. The results are shown in Table 5. From this, it is noted that for wheat and early vegetables, adequate yields may be obtained in possibly 40% of years. For maize, alfalfa and late vegetables however the need for irrigation is especially strong.

Frequency diagrams of moisture deficit under rainfed conditions for alfalfa (lucerne), sugar beet and maize for the Metohija scheme in western Kosovo are shown in Appendix 4 as calculated by the senior counterpart. These are the results of detailed simulation analysis, and show conclusively the dependence in about 90% of years on irrigation. As the average rainfall in western Kosovo is 780 mm per year and that for eastern Kosovo is 650 mm per year, it is apparent that the eastern part is even more dependent on irrigation.

Any simulation takes account of the effect of drought periods, which are more pertinent than annual or seasonal rainfall considerations. The incidence of droughts for western Kosovo at Peje is shown in Appendix 4. It may be assumed that a period in excess of two weeks would seriously stress the crops in the high evapotranspiration conditions occurring in the summer. In the 33 years of record, such droughts occurred in 25 years.

Conclusions

There can be no doubt that for all crops irrigation is essential if viable yields are to be obtained, and it must be considered as a requirement in the rebuilding of Kosovan agriculture. Review of rainfall maps indicates that there is no area which may be regarded as a lower priority.

D. PHYSICAL WORKS REQUIRED

General

It is difficult to be able to identify the priority physical works requirements from the limited site visits and the sparse data received. It is also not meaningful to only confine repair works to the very limited war damage in view of the long period during which maintenance has been neglected. Thus it is proposed to apply the emergency works to the parts of the various systems which appear most in need, take the least time, are simply executed, and have modest cost.

Major Schemes

Scheme Selection

Based on the selection parameters above, the priorities are proposed as follows:

(i) Priority 1

- high proportion of gravity supply/low pump requirement;
- level of previous investment;
- level of staffing at present;

- supplies to power and industry;
- regional equitability.

(ii) **Priority 2**

- high pump requirement.

On these criteria a tentative scope of works for immediate implementation is presented in Table 6. This covers eight selected schemes with a total command area of about 57,800 ha.

Details of Works Categories

On these schemes the following works are envisaged, which would be limited to critical repairs only, such as:

- ensure that dam control systems are operative;
- carry out temporary bound installation and fixing gates at gravity intake works;
- repair selected pumping facilities lifting water from rivers into gravity irrigation networks;
- repair selected pump facilities which lift to higher areas for gravity irrigation only;
- repair offices, stores and workshops;
- freeing the main canals of obstructions and essential repairs;
- freeing secondary canals of obstructions and essential repairs;
- fixing control gates to permit effective water control;
- install new or repair hydrants on pipe secondary system where pressure is derived from gravity only;
- attend to drainage requirements, including pumps;
- grade access roads and carry out essential repairs to bridges and culverts.

The level of repairs would not be to the standard of normal rehabilitation where all items are brought back to as-built standard, or where improvements are made. Works under this emergency programme would be just sufficient to permit operation of the systems to secure crops rather than to produce optimum yields.

Programme Preparation

The above proposals would require the approval of the (to be formed) steering committee outlined above. Following this, and as and when access becomes possible, detailed inventories of critical works should be made by the regional enterprise engineers under the guidance of the committee, assisted by foreign consultants. Overall selection, costing, programming and works scheduling should be by the steering committee, preferably assisted by foreign consultants or international bodies such as the FAO/CP.

Anticipating the needs for such a programme, the Consultant has left with the senior counterparts a list of recommended activities to start as soon as possible to collect data from all schemes. This is shown in Appendix 5. The prompt presentation to the committee of the recommended priority 1 list of schemes would reduce the work required and ensure the high priority schemes are surveyed in time for future missions and incoming assistance.

Technical Assistance

It is considered essential to engage foreign consultants to assist the Kosovan authorities in the planning, design, implementation, management and financial control of any reconstruction programme of the major schemes. It is envisaged that these would fulfil different roles, and would be recruited from different sources.

Overall consultants would be recruited internationally to support the local steering committee, and be limited to firms with wide experience in irrigation design, procurement, construction supervision and management. The team would also assist and advise on the preparation of follow-up rehabilitation projects. Such a team would include the following specialists:

Specialisation	Period (months)
- Team Leader (irrigation engineer)	9
- Pump/electrical Engineer	6
- Civil (construction) Engineer	9
- Procurement Specialist	6
- Accountant	9
- Short term Specialists	10
	—
Total	49

Field Consultants would be retained to assist the Water Enterprises in the communes to collect data for planning, design and monitoring, and to supervise the construction/repair works. It would be appropriate to retain two firms, one for the eastern sector and one for the western sector of the country. These could ideally be from Albania, and have been involved and trained in the World Bank funded Irrigation Rehabilitation Project, or from Macedonia. The composition of each teams might be:

Specialisation	Period (months)
- Team Leader (irrigation engineer)	12
- Pump/electrical Engineer	12
- Senior Civil (construction) Engineer	12
- Construction Supervisors (2)	24
	—
Total	60

Thus some 49 months of international and 120 months of regional consultant support should be provided, starting from October 1999 if possible.

Construction

In Former Yugoslavia and in the FR until recently, all construction activities were carried out by the construction wings of the regional Water Enterprises. Even if this were to be permitted under the procurement rules for the donors which may assist the reconstruction programme, these enterprises no longer have the capacity to do this, due to uncertain staff availability and a total lack of mechanical equipment. In general the works are small and scattered, and as such would not be of interest to large international contractors at normal contracting rates. Thus it is suggested that procurement be carried out under Regional Competitive Bidding, inviting bids from neighbouring surrounding countries such as Albania, Macedonia, Montenegro, Croatia, Slovenia and Bosnia. To assist in rebuilding local construction capacity in Kosovo, any regional contractor interested in bidding should combine with one of the Kosovan companies still in existence.

The counterparts advise that the following firms and state enterprises were involved in construction of irrigation works before the recent upheavals, and should be emerging to start works again. Such firms are:

- Binacka Morava, Gjilan;
- Kosovo Hydrotecnica, Pristina;
- Ramez Sadiqo, Pristina.

All these were state companies, and it is envisaged that these will soon become Joint Stock Companies. Numerous smaller private contractors existed.

Minor Schemes

General Approach

For the time being and until the irrigation sector is reorganised along free market principles, the method of administering minor schemes should continue as under the previous regime. That is the control of the regional water enterprise on those small schemes where the water supply is

considered a state resource. For those schemes where this is not the case, for instance groundwater exploitation, the individual farmers would have to carry out repairs under their own initiative. Little can be proposed regarding the physical requirements of this sub-sector as almost no data was available to the mission. It is likely that the major requirements will be for small concrete repairs, replacement and repairs to small steel gates, and the provision of small pumps. However, the sub-sector can be assisted through the flexible institutional procedures proposed below. Pump supplies for the smaller schemes, both under the enterprises and individual, could most conveniently be through larger agencies, which could be used as intermediaries in any credit arrangement. As in other internationally funded projects in other countries, such agencies would be expected to bid on a unit rate basis, and undertake to provide sustainable after-sales service and spare parts supply.

The counterparts have supplied the names of the following firms/enterprises which previously imported pumps. These are:

(a) **State Enterprises**

- EXIMKOS, Pristina;
- AGROKOSOVA, Pristina;
- MEHANIZACIJA, Pristina.

(b) **Private**

- Aza-Export-Import, Pristina;
- B+O, Pristina.

Again it is anticipated the former State Enterprises will form joint stock companies, which would permit them to bid.

E. ORGANISATION AND MANAGEMENT

Controlling Body

For the time being, until a civil administration is formed in Kosovo, the provisional Steering Committee referred to above would be the only body capable of controlling any assistance offered from international donors and NGOs for the irrigation sector. With the need for urgent and rapid processing of external aid, it is important that this body is formed as soon as possible.

The technical assistance consultants should also be recruited as soon as possible to assist this committee in setting up the programme, and to channel the incoming aid from the various donors in a coordinated manner such that duplication and competition is avoided.

Donor Coordination

It is suggested by the Consultant that the assistance which will be forthcoming from the large institutional and bilateral donors should be channelled to the major schemes. This could be through co-financing or parallel financing arrangements. The proposed Steering Committee could be responsible for advising the donors on such associations. It is likely that a donor consortium will be formed in the future, and this would be the most appropriate forum with which the Steering Committee would liaise.

It was also suggested by the Consultant that the small bilateral donors and the NGOs could assist primarily the small and minor scheme reconstruction. This is due to the relatively small amounts

involved, and the preference for NGOs to work alone and in defined territorial areas, with intimate contact with the grass roots. They also normally have funds available in ready cash on grant terms, more appropriate for small farmers with little or no financial resilience, and they do not have the complex and restricted procurement procedures of the multilateral and large bilateral donors.

In this way, both the large formal schemes and the scattered local minor schemes may be assisted by the donor agencies most suited. The channelling of donors to the appropriate sub-sector should be the primary roll of the Steering Committee in the early stages of fund inflow. Indeed, in the minor scheme sub-sector, it will be most important for the NGOs to be strictly channelled and controlled, as the less experienced and enthusiastic foreign field staff could go directly to regional offices and offer their assistance without following the normal protocols. This would confuse the regional Water Enterprises, and could lead to confusion and reduce the impact of their assistance. It is thus recommended that any donor should first present their offers to the Steering Committee, and be refused access to field offices.

Reconstruction Procedures

It is not possible in this brief report to outline in more than brief generalities the procedures for physical works execution once the donors have agreed with the Steering Committee on their role in the programme. This should be addressed in the immediate follow-up to the present mission. It is likely that the regional Water Enterprises will play a pivotal role in the exercise, using their consultants proposed above for technical support and private contractors.

Re-equipping the Sector

It will be necessary to provide significant funding to rebuild the infrastructural base for the sector. For this reason, the Consultant together with the counterparts has drawn up lists of equipment and vehicles for immediate procurement in order for the Head Office, the Hydrotechnical Institute, and the regional Water Enterprises to begin to function normally. As hydrometeorological data collection must continue to support the sector, items are included to reinstate the network urgently. This list is shown in Table 7.

F. COST ESTIMATES

General

With virtually no firm data, it is obviously not possible to compile cost estimates for the general civil works in the conventional way, with each item presented with its number and unit cost. In the case of pumping facilities, an attempt has been made to quantify the numbers and capacities of pumps, and approximate prices are applied to these. The management infrastructure equipment and technical assistance components may be more accurately estimated. It should be noted that the funds provided for this emergency repair programme would be the advance contribution in a longer-term rehabilitation of the sector.

Civil Works Costs

Recent experience in other countries would indicate that for full rehabilitation, works costs of between US\$ 1,000 and US\$ 2,000 are normal for western countries using world market rates for machinery and other inputs. In the present programme, only the most urgently needed repairs are to be considered, which are both as a result of the recent war and of 10 years of neglect. With no firm data on which to base costs, the Consultant has allocated a sum of US\$ 500/ha for all works, including local administration and engineering. Thus on the 57,800 ha defined above for the priority 1 major schemes, a cost of US\$ 28.9 million is derived. Physical contingencies are included in this sum.

Pumping Facilities

The derivation of these costs is shown in Table 8. From this, a base cost of US\$ 255,500 is estimated, including labour and transport, using very approximate rates and numbers. A physical contingency of 20% is added due to this uncertainty, yielding a total cost of US\$ 306,600.

Management Infrastructure

In Table 7, the proposed items of equipment are listed, from which an overall cost of US\$ 4,039,500 is derived. No physical contingencies are applied.

Technical Assistance

For the international consultants, with a total input of 49 person/months and an all-up rate of US\$ 23,000 applied, the cost would amount to US\$ 1,127,000.

For the regional consultants, an all-up rate of US\$ 6,000 applied to the estimated 60 person-month gives a cost of US\$ 360,000.

Minor Irrigation

Without information on the areas requiring repairs, it is not possible to estimate a cost with even the level of accuracy of the major schemes. As a very approximate "guess", some 10,000 ha will be assumed at a unit cost of US\$ 50/ha, giving a total cost of US\$ 500,000 for civil works.

Statistics obtained indicate that there were some 3017 small pumps in operation in agriculture in 1995. If it is assumed that 25% of these were destroyed, replacement would amount to about US\$ 452,000.

Local Salaries and Allowances

At present, and possibly for the foreseeable future, no salaries are being paid to Kosovars staff.

Should the donors consider making payments to these staff, this might amount to some US\$ 10,000 per month in total, using the previous government rates for the head office and regional water enterprise staff engaged in the project.

Summary

From the above, a summary cost table is shown in Table 9, indicating a total cost of US\$ 37.7 million. If the apportionment proposed above is followed, this would break down into US\$ 34.7 million for the major donors, and US\$ 952,000 for the minor donors and NGOs. No local salaries are included in these amounts.

KOSOVO

PROGRAMME FOR RECONSTRUCTION OF RURAL ECONOMY

WORKING PAPER 5

FORESTRY NOTE

(Prepared by Mr. L. Dubreuil)

Working Paper 5

FORESTRY NOTE

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The communes of Pristina, Prizen, Ducan, Ferizaj, Istoq, Mitroviça were visited and various foresters who have been involved in Forestry Organizations or Industry at the communal level have been met. The NGO Mercy Corps International kindly arranged an introductory meeting with Professors of the Kosovar Agricultural Faculty.^{53/} Mr. Neijat Karahoda, former Director of the Wood Directorate of Kosovo, facilitated contacts with foresters in the communes visited.

^{53/} The Faculty was a parallel Albanian Faculty not recognised by Belgrade.

A meeting was organised in Pristina on 16 July 1999 with available foresters from various communes, during which forestry issues were discussed. The following findings will serve as a basis for preparing a Working Paper to be attached to the identification report produced by TCIE - Reconstruction Programme of Rural Economy in Kosovo.

A. ASSESSMENT OF THE SITUATION

The assessment presented herein is based on discussions with former forestry staff, private entrepreneurs and villagers during field visits and meetings. No recent data is available as most archives have been taken away or destroyed. A questionnaire, aiming at providing estimates about the forestry sector today in Kosovo, was prepared for distribution in the communes. Those who attended the Pristina meeting will attempt to reach foresters in all communes and to return the questionnaires within two weeks, despite the lack of communication facilities.

Forest Administration

Following the Yugoslavian administration system, Kosovo is divided in 29 communes (*Komuna*). Nineteen have a Forest Organisation (*Organizatat Pyjore*) responsible for all forestry activities, including forest management and control, wood exploitation and sales. The Organisation was generally staffed with a Director, not necessarily a forester, forest technicians, forest guards and workers. Equipment such as cars, trucks and chainsaws were available. The *Organizats* were financially autonomous with the exception of some budgetary inputs from Pristina for planting activities.

Industrial wood processing in Kosovo was undertaken until recently by eight state factories (*Kombinat*), with an autonomous administration.

In 1989 and 1990, all Albanian Kosovars, including technical staff and workers, were dismissed from the *Organizats* and *Kombinats*^{54/}, leaving them largely understaffed and affecting their operating capacity.

After the recent retreat of the Serbs from Kosovo, the Forest Organisation offices were abandoned, and many of them were partially destroyed. Vehicles and equipment have disappeared or been left unrepaired.

With a return to stability, former Albanian staff are gradually joining their original organisations, usually in the same position. Presently, it is not known how many have returned to their home place and organisation. After nine to ten years outside the system and the departure of the Serb administration, they have no institutional memory left.

Forestry Resources

Figures for 1989 indicate that forestland covers about 430,000 ha, 47 percent of the total area of Kosovo, out of which 266,000 ha are State-owned and 162,000 ha are private. The forestland comprised roughly 72,000 ha of high canopy forests, 31,000 ha of medium canopy forests, 264,000 ha of low canopy forests, and 63,000 ha of shrub and degraded vegetative cover. Deciduous species, and mainly beech (*Fagus selvatica*), are largely dominant. Some limited pine stands exist, often in artificial plantations.

According to data provided by the Faculty^{55/}, the standing volume of the Kosovo forests was about 30,400,000 m³ and the then annual exploitation planning about 952,000 m³ consisting of 400,000 m³ of timber and 550,000 m³ of fuelwood.

^{54/} Such dismissals affected all sectors in Kosovo.

^{55/} These figures apparently were extracted from a central planification study of the then provincial authorities in the 80s.

Forestlands in most accessible areas are noticeably overharvested through short rotation clearcuts for fuelwood. High canopy forests, in higher altitude remote areas, are reported to have been particularly overlogged since 1990 for 'export'. The overall exploitation has certainly exceeded the above planning figures.

Although there was a Reforestation Fund, financed by the Yugoslavian Central Government, planting activities have been very limited (around 50 ha/commune/year on average). Actually, comparison with figures of a 1971 study show that there was a decrease in high canopy forest during the period 1971-1989.

Unfortunately, some parts of the Kosovo borders where large tracks of high canopy forests can be found, are now heavily mined.

Forest Industries

Forest industries in Kosovo comprise eight state plants^{56/} with initial investment financed by the Yugoslavian Government over the last few decades. They were oriented towards the production of furniture and were supplied with logs by the local Forest Organisations but were reportedly not running at full capacity.

Since 1990, the activity of some of these *Kombinats* has gradually decreased and most of the modern equipment has been stolen. Older machines have been left idle and without maintenance for many years and parts are often stolen or destroyed. Furthermore, some industries were bombed during the war as they were used to shelter military vehicles (Ducan, Ferizaj, etc.).

On the other hand, the *Kombinat* of Istoq, a modern industry created in 1988, was running until the beginning of the war, and was left intact after the departure of Serb staff in March 1999. The plant is now under the custody of KFOR, which uses it as a campground for its force in Istoq.

It was not possible for the mission to assess the financial viability of these plants because of the lack of time and data. It is understood that these state industries received supplies at State-fixed prices from the Forestry Organisations and most of the production was exported. With respect to budgetary aspects, the central government would collect incomes above the annual planned target or complement budgets if the annual income were below target. Forest Organisation or Industry officials reported some episodes of mismanagement in the past to the mission, such as the re-selling of logs to the private sector.

Private Forestry Enterprises

The involvement of the private sector in forestry activities remained modest until 1989/1990 and was strictly controlled by the Government. After 1990, a loosened control and necessity encouraged unemployed Albanian Kosovars to create their own enterprises. The mission found between 16 and 30 wood enterprises in each of the visited communes. If returned, the questionnaire should indicate their number in all communes. Major differences are not expected in their features (size, type, supply, etc.). However, the level of destruction might vary as some parts of Kosovo were less affected than others.

There are small sawmills (20 to 30 m³ log/day on average), often combined with door/window manufacturing. Machinery usually consists of a horizontal alternative saw for pit sawing, a circular saw and one or more multi-functional machines (spindle moulder/slotter and truing up/surface planing). Almost all head saws are made in Yugoslavia; the other machines are Yugoslavian or European depending on resources and preferences. Private enterprises employed some 5 to 15 workers up until the war.

^{56/} These are: Gjeravica in Decani, Radusha in Istoq, Mokra-Gora in Mitrovica, Hrasti in Leposavic, Javori in Podujeva, Tekik Çanga in Ferizaj and one in Peja. The Napredak in Pristina was closed down many years ago.

The machines are always well maintained, resulting in generally good quality sawing. The quality of the manufactured products seen varies from mediocre to good, depending on the equipment but also due to lack of training.

Supplies consist mainly of pine imported from Montenegro, sometimes from Bosnia or Slovenia. This is due to: (a) the hardness of local species, mainly deciduous; (b) the difficulty in getting local supplies, the Forest Organisations giving priority to the *Kombinats*; and (c) cheaper prices from Montenegro.

During the war, all enterprises were left unguarded and a very large majority of them have been looted and often burned. New machines have been taken away, as well as the most valuable parts of the machines left behind.

Owners, who have now returned for the most part, are already in the process of restarting their activity. With their own resources, they are searching for equipment, generally the head saw (for pit sawing), as they cannot afford more equipment for the time being. As Yugoslavian machines are not available and European ones are considered too expensive, most entrepreneurs are looking for Turkish-made machinery.

For log supplies, entrepreneurs are relying on their previous partners in Montenegro, Slovenia or Bosnia. Because of a trust relationship developed over the years, suppliers are granting a grace period of 3 to 12 months for payment, also as a means to demonstrate their support to Kosovo reconstruction.

House Reconstruction

An assessment of house destruction, carried out by IMG, is underway. In all cases, roofs have suffered and roof frames have to be replaced. In the past, roof framing timber (sawn pinewood) was supplied by local private sawmills or it was imported. Sawmill owners expect that demand will gradually increase according to families' financial resources for house reconstruction and will orient their efforts to restore their sawing capacity in order to respond to that demand.

An estimate of sawn wood requirements will be possible as soon as the survey is completed, and is expected before the end of July.

Fuel

Wood is the traditional fuel for heating and cooking in Kosovo, particularly in the rural areas. Coal and paraffin are hardly used, though it seems that there were some stoves in urban areas before electricity became largely available. Kosovo beech forests, both state or private, represent the main source of fuelwood, with some imports from neighbouring provinces of former Yugoslavia to complement local supplies. The average price is about 50-60 DM/m³. Urban areas used more electrical appliances, as power was readily available at reasonable prices. Because of disruptions in the power supply and financial constraints, it is expected that the demand for fuelwood will drastically increase this year, obviously during the winter. As a matter of fact, the mission could already see numerous tractor loads of beech fuel on the roads or in markets. Selling fuel is for many agriculturists also an immediate source of income as they missed the current agricultural campaign (70% of the arable land was not cultivated this year). Therefore, in the absence of control and proper management, it can be expected that the most accessible and safest areas will be heavily exploited during the next months.

Considering that a household would need about 7 m³/year, and assuming that the power supply will be promptly restored, the total fuelwood needs for 1999/2000 can be roughly estimated at 2,000,000 m³. However, some parameters might significantly alter this estimate: (a) the fact that extended families tend to live under the same roof, most of their houses having been destroyed; (b) the availability of cash resources and fuel on the markets; and (c) the harshness of winter.

B. POSSIBLE ACTIONS

Forests

De-mining is a pre-condition to any further forest development activities. A plan of action, based on priority areas according to criteria to be defined (production potential, location, etc.) with de-mining teams should be established. In the meantime, demarcating and awareness should be ensured in coordination with the various organisations operating in the communes.

An inventory will need to be carried out to assess the state of the high canopy forests; currently this information is totally lacking and in the absence of data on logging during the last years, it is not possible to rely on 1989 and prior data.

Management plans will have to be formulated for all forest classes.

Fuelwood

The fuelwood issue needs to be urgently addressed in order to ensure that fuel needs are met without excessively damaging forest resources. The following two interventions would help relieve the pressure on forests though it will be difficult to fully control wood exploitation in the first months.

Managing fuelwood exploitation will require: (a) the identification of safe accessible areas; (b) the formulation of simple management plans; and (c) the organisation of harvesting activities through local contractors, or family permits, or other suitable mechanisms. Financial charges might be considered at some stage.

For security reasons, mined areas should be physically demarcated to prevent access to people in search of fuel.

The adoption of alternative energy stoves should be encouraged. People have had some experience with paraffin stoves in the past and the feasibility of importing stoves and paraffin should be examined rapidly. Paraffin could easily be distributed through gas stations. In any case, the option adopted should not be a temporary measure and will have to be sustainable in the long-term.

Forest Industries

There is a strong will among former staff to restart industrial activity. However, a detailed review of all *Kombinats* should be carried out in order to assess the feasibility of their rehabilitation and their financial viability under the new market conditions. Furthermore, from mission visits and discussions, it appears most unlikely that industries could rely on local forest resources for their supply in the short and medium-term given the current state of the forests.

The question of ownership of the industries will have to be clarified before any activity can start^{57/}. It will condition financing mechanisms. However, rehabilitation proposals could be prepared and possible sources of funding identified.

Private Sector

The efforts of the private sector to restore their productive capacity should be supported with the objective of contributing to the reconstruction of the Kosovo economy and to creating a modern and already dynamic small-scale wood processing business. The following actions would be required.

An assessment of the actual restarting mills and their needs in machinery should be carried out as soon as possible. On the basis of the assessment, the import of equipment should be facilitated.

Payment facilities would greatly enhance the impact of the import component and, even more

^{57/} These industries have been financed by the Yugoslavian Government (sometimes through international loan), and used to "belong to the workers" who elected their management. Today there is a strong feeling of ownership among former staff in the Communes.

important, would allow for promoting modernisation with more efficient, and usually more expensive machines. In particular, sawers should be encouraged to adopt “scies à ruban” instead of alternative saws. Equipment, with prices, origin and technical specifications, should be identified and an import/distribution mechanism should be quickly adopted (a similar issue was raised for agricultural equipment).

Short training courses in the communes should be organised (including working protection topics), free of charge.

An assessment of the production capacity of the restored mills should be made and house reconstruction programmes should be encouraged to promote local purchases of sawn products for roofing or others (lambris, floors, etc.) accordingly. Imports should be limited to complement local production or as a substitute to default supplies.

Forest Administration

A forest service structure will be required to implement most activities. Forest Organisations are being gradually restaffed. However, in the absence of an official Government, this is still an informal process and activities will need to be carried out under the responsibility of the Interim Administration of UNMIK. As soon as the UN Administration is in place, working arrangements will need to be defined in order to involve Kosovar foresters in what will be in future the duties of Forest Organisations.

Summary of Possible Actions in the Forestry Sector of Kosovo

Item	Activities	Priority
Fuelwood	Identify safe accessible areas Define management plans Organise fuelwood exploitation Physically demarcate mined areas in accessible areas Implement alternative energy stove programmes	First (1&2)
De-mining	Identify possibly mined forest areas Set priority areas according to forestry development plans Sign agreements with demining teams (KFOR, NGOs)	First (1)
Forest industry	Clarify ownership Review the state of Forest Kombinats Assess feasibility of rehabilitation Find funding mechanisms	
Private sector	Assess the needs for machinery Set up payment facilities Facilitate import of such machines Encourage modernisation Assess potential production Encourage local purchase of reconstruction material Provide training courses	First
Forest Administration	Define working arrangements with UNMIK Organise refresher/training courses for foresters Assess urgent minimum staffing and equipment needs Secure required equipment	First (1&2)
Forest management	(after de-mining) Do rapid forest inventory Draw up management plans Design and finance a planting programme	

(1): Action should be started as soon as possible.

(2): Action should be completed ideally before winter.

Details and costs of selected activities will be possible as soon as data is available and progress made towards resettlement.

**Kosova Agriculture and Agribusiness Sector Assessment
and
Development Program Recommendations**

Attachment D

Overview of Kombinat and Cooperative Facilities

Overview of Kombinats and Cooperatives

Name	Location	Base Business	Land Controlled	# Employed	Private Sector Supply Acres	Est. # of People Impact	Est. Rebuilding Cost
Progress Vegetable Processing Co	Prizren	10,000 MT vegetables intake capacity	1,440, mostly for green peas	135	24,000	45,000	??
Progress Dairy Processing Co	Prizren	15,000 liters/shift dairy processing plant					Minimal
Kosovavera Wine Co.	Prizren	Vineyards & winery with 16,500 MT grape intake capacity	4,272	170	1,392	7,000	Minimal to operate; \$2.6 mil. To completely refurbish + WC
Suhareke Wine Co.	Suhareke	Vineyards & winery with 7,000 MT grape intake capacity	2,040	350	1,008	5,000	Minimal to operate; \$550,000 mil. to completely refurbish + WC
Rahovec Wine Co.	Rahovec	Vineyards & winery with 40,000 MT grape intake capacity & 28,000 MT wine production capacity	2,400 vineyards + 1,200 farmland	300	9,600	20,000	Minimal to operate; \$5.5 mil. To completely refurbish + WC

Ereniku Fruit Processing Co.	Gjakove	20,000 MT fruit intake/yr., fruit juices, preserves, & other processed fruit products	2,047 orchards, 4,282 of cropland	250	3,070	30,000	\$237,000 for processing plant
Sun Seed Co.	Ferizaj	Consumer veg. oil, hydrogenated veg. oil, margarine with 25,000 MT intake/yr. Capacity	Around facilities only	210	20,000	40,000 (5 ha. each x family of 10)	\$1.0 mil. to fully refurbish
Bakery Kombinat	Ferizaj	21,000 loaves/day bakery; 150 MT storage capacity + own flour mill	Around facilities only	112			
Mulliri Flour Mill	Fushe Kosove	80,000 MT wheat & 3,500 flour storage & 200 MT/day flour milling	Around facilities only	150			\$983,000 inc. WC
Ereniku Layer Farm	Gjakove	200,000 layer capacity; 730,000 18 week old chicks/yr.;					Minimal to operate
Layer Coop	Lipjan	400,000 layers & 80 million eggs/year	Around facilities only	140	Corn from coop	?	\$1.8 mil., to fully refurbish inc. WC
Sugar Beet Co.	Peje	Process sugar beets into sugar					“Partly damaged but could resume operation”

Flour Mill	Xerxe	80,000 MT wheat & 3,500 flour storage & 200 MT/day flour milling	Around facilities only	150			?
Dubrava Farms	Istog	Integrated Livestock Farm with capacity for 1,200 cattle + 18,000 pigs & 5 MT/hr. feed mill	2,880	170			Minimal physical damage; \$3.6 mil. to replace livestock
Seed Cleaning Plant	Kline	Cleaning, grading and storing planting seed					Not damaged
Feed Mill	Kline	Large capacity feed mill					Not damaged
Kosova Export	Fushe Kosove	Multi functional, integrated complex with 2,000 cow dairy farm, 30,000 t/yr. Feed mill; 25,000 capacity pig farm; slaughter house & meat processing with 4,000 T cold store	3,600	500 currently, was 1,290			
Dairy Processing Co.	Fushe Kosove	Largest dairy plant in Kosova with capacity of 100,000 liters/day;	Around facilities only	70	67 receiving points around Kosova		\$200,000, inc. WC

Progress Kombinat	Prizren	Slaughter house, primarily for sheep; capacity 70,000 sheep & 26,000 cattle/year + 5,000 MT cold store	1,700 @ dairy & fattening operation + vegetable production;	83 on farm, 39 in maintenance facility, 35 in transport, 78 in retail & wholesale trading, 40 in producer support, 65 in slaughter house & meat products, 17 in dairy			??
Ereniku Winery Co.	Gjakove	Vineyards & winery with 13,000 MT grape intake capacity	3,094	200	360	1,300	Minimal
Minex Bakery Products (formerly Bambi)	Ferizaj	Coffee roasting & packaging; sugar, tea & rice packaging; biscuits & pretzel baking; extruded snacks; roasted peanuts	Around facilities only	200			\$20,000 to refurbish; \$245,000 inc. WC
Brewery Co.	Peje	Brewery with 600,000 hl./year					
Mushroom Production Co.	Klina	Not operating					

**Kosova Agriculture and Agribusiness Sector Assessment
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Attachment E

**Kosovo Recovery Program
Re-Launching the Rural Economy**

Kosovo Recovery Program Re-Launching the Rural Economy - hard copy only

**Kosova Agriculture and Agribusiness Sector Assessment
and
Development Program Recommendations**

Attachment F

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